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**Methodologies And Design Criteria For  
Soil And Water Resource Management  
And Policy Formulation In Peri-Urban  
Farming Systems In Southern Africa**

**The Social and Institutional Aspects of  
Urban Agriculture in the Cape Flats,  
Western Cape, South Africa**

**Dr Kate Meadows**

**Social Sciences Department**

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AND POLICY FORMULATION IN PERI-URBAN FARMING SYSTEMS IN SOUTHERN AFRICA**

**THE SOCIAL AND INSTITUTIONAL ASPECTS OF URBAN  
AGRICULTURE IN THE CAPE FLATS,  
WESTERN CAPE, SOUTH AFRICA**

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APRIL 2000**

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EU-INCO RESEARCH PROJECT, CONTRACT NO: ERBIC18 – CT97 - 01610**



**Natural  
Resources  
Institute**



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**List of Acronyms**

**CMC:** Cape Metropolitan Council

**CMA:** Cape Metropolitan Area

**DLA:** Department of Land Affairs

**RDP:** Reconstruction and Development Programme

**FGF:** Food Gardens Foundation

**QPC:** Quaker Peace Centre

**SANCO:** South African National Civic Organisation

**MSDF:** The Metropolitan Spatial Development Framework

**MOSS:** Metropolitan Open Space System



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## **EXECUTIVE SUMMARY**

### **Introduction**

This report is concerned with the status of urban agriculture in the Cape Metropolitan Area (CMA) of the Western Cape, South Africa. It focuses specifically on the nature of urban agriculture in the Cape Flats area and explores the conditions that influence the extent of urban agriculture in low-income township areas situated on the Cape Flats. A primary focus of this research is the socio-political and institutional context that affects the practice of urban and peri-urban farming, specifically vegetable production, in the CMA. This report is the result of a four month study of Cape Town urban agriculture and is mainly based on information gathered during fieldwork conducted in and around the Cape Metropolitan Area, South Africa, during August 1999–January 2000. Topics covered in this report include the broader socio-political and environmental context of urban farming in the CMA, as well as the policy and planning frameworks (both national and regional) that shape urban agriculture practices in the Cape Flats townships. It is also a comparative study intended to complement research already conducted in Mamelodi, Pretoria and Harare, Zimbabwe. These studies are part of a four year European Union funded research project that commenced in November 1997. The entire project is a joint research program aimed at developing the economic, scientific and technological means to expand income-generating vegetable farming activities in urban and peri-urban areas in southern African countries.

The methods employed in the completion of the research included meetings with key informants and urban agriculture practitioners, questionnaires and surveys for case studies, site visits and transect walks. The research was limited by time constraints, language differences and cultural influences. Analysis of data in this report is based, primarily, on the interpretation of qualitative information, with some quantitative data included to set qualitative findings into context.

As in most of the developing world, South African urban areas have historically been better served than rural with the rich having greater access to services than the poor. However, unlike elsewhere, differential access to services pre-1994, also corresponded to legislated racial divisions. Government attempts to address the situation include initiatives such the Reconstruction and Development Programme (RDP) and self-help Masakhane campaign. With respect to food security, the White Paper on Agriculture (1995) addresses both national and household food security while the RDP and the Growth, Employment and Redistribution strategy (GEAR) provide a strategic framework to achieve food security.

### **Urban Agriculture in Cape Town**

The Cape Flats is situated in the Western Cape Province of South Africa, and is part of the Cape Metropolitan Area, the southern most metropolis on the African continent. Historically, settlement on the Cape Flats was avoided due to its exposed aspect and poor soils. However, over the last 60-70 years, urban development has spread to the Cape Flats, a growth influenced by apartheid planning policies and population pressure. In 1996, the population of the CMA was approximately 2.56 million. The Cape Flats is one of the areas under the greatest settlement pressure. Poverty and unemployment are widespread in the Cape Town area, particularly in the Cape Flats townships, with almost the entire African population of Cape Town falling within the low-income category. In 1999, local government in the Cape Metropolitan Area, comprised a single metropolitan council, the Cape Metropolitan Council (CMC) and several metropolitan local councils (MLCs). There are six MLCs, namely City of Tygerberg, Blaawberg, Oostenberg, City of Cape Town, South Peninsula and Helderberg.



The case studies in this study fall within the City of Cape Town and City of Tygerberg municipal council areas.<sup>1</sup>

### **Land Use Planning & Policies affecting Urban Agriculture**

In South Africa, integrated development plans (IDPs) and land development objectives (LDOs) are two of the land use planning instruments that have the potential to influence land use such as urban agriculture. There are also several laws at national, provincial and/or local level, governing activities such as urban agriculture. These include the Constitution, the Development and Facilitation Act, and the Local Government Transition Act. A number of government policies also exist that are concerned with issues that directly affect agriculture in the urban context. These include:

- The National Department of Land Affairs' Land policy
- The Provincial Administration of the Western Cape policy on the establishment of agricultural holdings in the Urban Fringe
- The Metropolitan Spatial Development Framework (MSDF) and Metropolitan Open Space System (MOSS)

### **Urban Agriculture and 'Greening' NGOs and Institutions**

There are a number of organisations in and around Cape Town that are involved in supporting urban agriculture initiatives. Those that directly support grassroots urban agricultural projects, and in particular vegetable gardening, include:

- Abalimi Bezekhaya
- Tsoga (Wake Up) Environmental Centre
- The Land Development Unit (LDU)
- The Quaker Peace Centre (QPC)
- Food Gardens Foundation (FGF)

In addition to the locally based institutions and organizations, there are a number of other groups that are involved in and/or contribute to the development and facilitation of urban agriculture in the Western Cape and elsewhere. These include:

- The Kommetjie Environmental Awareness Group (KEAG)
- The Centre for Integrated Rural Development (CIRD)
- The Program for Land and Agrarian Studies (PLAAS)
- The PELUM Association (Participatory Ecological Land-use Management)

### **Urban Agriculture and Community Gardening Groups**

As part of the research conducted for this report, a number of case studies on gardening groups in Cape Town were undertaken. Each of the groups is located in one of four Cape

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<sup>1</sup> Recent developments have seen additional changes being made to the current structure of local government. Several South African metropolitan areas have been earmarked for further local government restructuring aimed at improved service delivery and consolidation of resources across the board. In the case of the Cape Town metropolitan area, the proposed changes will result in the formation of a "Unicity", amalgamating previously separate local government bodies under one banner.

Flats townships: Langa, Nyanga, Philippi or Khayelitsha. The results of these case studies are presented in Tables I to V

**TABLE I: GROUP HISTORY & FUNCTIONING**

	<b>Masizakhe Gardening Group</b>	<b>FGF-Parkwood community project</b>	<b>Sinethemba Gardening project</b>	<b>SCAGA Siyazakha Community Allotment</b>	<b>Quaker Peace Centre Nyanga Garden</b>	<b>Manyano Support Group</b>	<b>Masibambane Women's Group</b>	<b>Phatisanani Women's Gardening Group</b>
<b>Impetus for starting the project</b>	1 community member (with help from LDU)	Principal of Acacia Primary School (with help from FGF)	Community members (with help from Tsoga)	Community members (with help from Abalimi)	Quaker Peace Centre, on request of community members	Two community members	1 community member & her neighbours (with help from Abalimi)	A change in Masibambane's group dynamics (+ assistance of Abalimi)
<b>Location of project</b>	New Crossroads, Nyanga	Parkwood	Langa	Khayelitsha, Town 3	KTC, Nyanga	Khayelitsha, Town 2	Brown's Farm, Philippi	Brown's Farm, Philippi
<b>Access to land</b>	Church	School	[Church*]	Servitude land**	Church	School & Church	School	School
<b>Plot allocation: Collective or Individual</b>	Collective	Collective and individual	Collective	Collective & individual	Individual	Collective	Collective	Individual
<b>Action &amp; responsibility for garden plots</b>	Group responsibility for actions and decisions (dominated by leader)	Responsibility for collective plots taken by NGO. Responsibility for individual plots taken by each gardener	Group responsibility & actions and decisions	Responsibility for collective plots taken by NGO. Responsibility for individual plots taken by each gardener	Individual responsibility for actions and decisions, but dominated by supervision of NGO representative	Group responsibility for actions and decisions (dominated by leader)	Group responsibility for actions and decisions (dominated by leader)	Individual responsibility for actions and decisions

\*Previous area of cultivation, currently not being used (see Case Study 5)

\*\*Servitude land is a corridor of open space on which infrastructure for urban service supply, such as electricity pylons, are located. Servitude land is especially significant in township areas where population pressure creates a high demand for residential land, leaving only a few areas as open space.

**TABLE II: MEMBERSHIP**

	<b>Masizakhe Gardening Group</b>	<b>FGF-Parkwood community project</b>	<b>Sinethemba Gardening project</b>	<b>SCAGA</b>	<b>Quaker Peace Centre Nyanga Garden</b>	<b>Manyano Support Group</b>	<b>Masibambane Women's Group</b>	<b>Phatisanani Women's Gardening Group</b>
<b>1. Membership fees</b>	None	None	None	R10	None	R10	R10	None (future – R10)
<b>2. Number of members</b>	25 (15 youths)	7	10	16	113	10	12	12
<b>3. Male: Female ratio</b>	8:17	4:3	0:10	0:16	5:108	0:10	0:12	0:12
<b>4. Female heads of households among members</b>	3	2	8	14	?	10	6	2
<b>5. Ages of members</b>	14-50+	39-52	Approx. 20-40+	Average age=35	?	40+	?	40+
<b>6. Previous residence of most members</b>	Cape Town	Cape Town	Cape Town & Eastern Cape	Transkei	Eastern Cape	Eastern Cape	Eastern Cape	Eastern Cape
<b>7. Social links between members</b>	✓ (School)	None	✓ (Church)	None	None	✓ (RDP & SANCO)	½ (Training at Abalimi)	½ (Training at Abalimi)
<b>8. Social links of groups to surrounding community</b>	✓ (Education and artistic programmes. Also plan to have a soup kitchen & sell seedlings)	None	✓	½ (nursery)	None		None	None
<b>9. Other activities undertaken collectively by members in the group</b>	✓ <ul style="list-style-type: none"> <li>• Arbour day</li> <li>• Open days at the garden</li> <li>• Youth involved in artistic activities – mural painting, mosaic design etc.</li> </ul>	None	✓ (Catering & Social services at funerals)	✓ (Sewing)	None	✓ Soup kitchen	✓ Cultivation in tunnel	None
<b>10. Future plans</b>	<ul style="list-style-type: none"> <li>• Undergo further training</li> <li>• Extend the garden</li> </ul>	<ul style="list-style-type: none"> <li>• Increase garden's flower sales</li> <li>• Run a competition for the gardeners</li> </ul>	<ul style="list-style-type: none"> <li>• Begin a new garden</li> <li>• Start a soup kitchen</li> </ul>	<ul style="list-style-type: none"> <li>• Earn more money</li> </ul>	?	<ul style="list-style-type: none"> <li>• Start chicken farming</li> <li>• Set up a pre-school</li> <li>• Create own jobs</li> </ul>	<ul style="list-style-type: none"> <li>• Tunnel cultivation</li> <li>• Home industry activities, e.g. pottery, bead-making &amp; mat-weaving</li> </ul>	<ul style="list-style-type: none"> <li>• Introduce membership fees (of R10)</li> <li>• Extend the garden</li> <li>• Undergo further training</li> </ul>
<b>11. Portion of group with home gardens</b>	A few	None	½	Some	Some	Some	?	?

KEY: ? indicates that no data was available at the time of research

**TABLE III: EXPERIENCE, MOTIVATION & SUPPORT**

	<b>Masizakhe Gardening Group</b>	<b>FGF-Parkwood community project</b>	<b>Sinethemba Gardening project</b>	<b>SCAGA</b>	<b>Quaker Peace Centre Nyanga Garden</b>	<b>Manyano Support Group</b>	<b>Masibambane Women's Group</b>	<b>Phatisanani Women's Gardening Group</b>
<b>Previous experience</b>	Low	Low	Low	Low	Low	Low	Low	Low
<b>Sources of experience / training,</b>	Abalimi Bezekhaya & LDU	FGF	Tsoga	Abalimi Bezekhaya	QPC	Abalimi	Abalimi	Abalimi
<b>Sources of support (donations, ongoing technical support or finances)</b>	<ul style="list-style-type: none"> <li>• LDU</li> <li>• Australian High Commission</li> <li>• Private individuals/companies</li> </ul>	<ul style="list-style-type: none"> <li>• FGF</li> <li>• Peninsula School Feeding Scheme</li> <li>• Round table</li> <li>• Department of Health</li> <li>• Private companies</li> </ul>	Tsoga	Abalimi Bezekhaya	QPC	Abalimi Bezekhaya	<ul style="list-style-type: none"> <li>• Abalimi Bezekhaya</li> <li>• Government social services</li> </ul>	Abalimi Bezekhaya
<b>Motivations for gardening</b>	<ul style="list-style-type: none"> <li>• Interest</li> <li>• Previous experience</li> <li>• Community development</li> </ul>	<ul style="list-style-type: none"> <li>• Employment</li> <li>• Income</li> </ul>	<ul style="list-style-type: none"> <li>• Subsistence</li> <li>• Income</li> <li>• Pleasure</li> <li>• Community development</li> </ul>	<ul style="list-style-type: none"> <li>• Subsistence</li> <li>• Income</li> <li>• Employment</li> <li>• Previous experience</li> <li>• Pleasure</li> </ul>	<ul style="list-style-type: none"> <li>• Subsistence</li> <li>• Income</li> <li>• Pleasure</li> </ul>	<ul style="list-style-type: none"> <li>• Food security</li> <li>• Community Development</li> <li>• Income</li> </ul>	<ul style="list-style-type: none"> <li>• Subsistence</li> <li>• Income</li> </ul>	<ul style="list-style-type: none"> <li>• Subsistence</li> <li>• Income</li> <li>• Community Development</li> </ul>
<b>Community attitude</b>	Positive & Negative	Positive	Positive	Positive	Positive	Positive	Positive & Negative	Positive
<b>Outside assistance / Involvement of others in the garden</b>	✓ (Adult volunteers)	X (although school children sometimes assist)	✓ (but limited)	X (except volunteers working for Abalimi Bezekhaya on temporary basis)	X	✓ (local community members)	X	X



**TABLE IV: PROBLEMS: Natural and organisational problems and solutions**

		<b>Masizakhe Gardening Group</b>	<b>FGF-Parkwood community project</b>	<b>Sinethemba Gardening project</b>	<b>SCAGA</b>	<b>Quaker Peace Centre Nyanga Garden</b>	<b>Manyano Support Group</b>	<b>Masibambane Women's Group</b>	<b>Phatisanani Women's Gardening Group</b>
<b>Pests</b>	Snails	✓	✓	None	✓	?	✓	✓	✓
	Caterpillar (esp. Cabbage white)	✓	✓	✓	✓	?	✓	✓	X
	Birds	✓	X	X	X	X	X	X	X
<b>Techniques for the removal of pest</b>		None	Organic pesticides & sprays, tobacco dust	None	Tobacco dust	Sprays, hand-picking pests off	Hand-picking pests off, tobacco dust	Hand-picking pests off, tobacco dust	Hand-picking pests off, tobacco dust
<b>Comments about the garden's soil</b>		Not very fertile, very sandy	Water-logging in winter, sandy	N/A (group is currently without a garden)	Very sandy & windblown	Sandy	Sandy & stoney with building rubble	Very sandy & windblown with high evaporation rates	Hard and stoney
<b>Theft</b>		X (but anticipated)	X	X (but anticipated)	X (but perceived threat)	X (but anticipated)	X	X	X
<b>Diseases</b>		None	None	Yellow leaves	None	Yellow leaves	None	None	None
<b>Organisational problems</b>		1.) Lack of motivation (esp. among youths) 2) No remuneration for volunteers	Lack of motivation	1) Lack of access to land 2) Group conflict	Group conflict	Lack of access to land			

**TABLE V: CULTIVATION**

		<b>Masizakhe Gardening Group</b>	<b>FGF-Parkwood community project</b>	<b>Sinethemba Gardening project</b>	<b>SCAGA</b>	<b>Quaker Peace Centre Nyanga Garden</b>	<b>Manyano Support Group</b>	<b>Masibambane Women's Group</b>	<b>Phatisanani Women's Gardening Group</b>
<b>Bed preparation</b>		Raised beds	Trench beds	Raised beds	Trench beds	Raised beds	Trench beds & raised beds	Trench beds	Trench beds & raised beds
<b>Planting seasons</b>		All year	All year	Summer & Winter	All year	Summer, winter & Spring	All year	All year	All year
<b>Soil improvers &amp; additions to the soil</b>	Manure	✓	✓	✓	✓	✓	✓	✓	✓
	Compost	✓	✓	✓	?	✓	?	?	?
	Mulch	✓	✓		✓	✓	✓	✓	✓
	Inorganic Fertiliser	X	X	✓	X	X	X	X	X
	Other	Topsoil	Topsoil		Bonemeal	Organic growth stimulant	Crop residues	Crop residue	Crop residue
<b>Access to water</b>		Tap on site (used neighbour's tap when not connected)	Tap on site	Tap on site	Borehole & tap on site	Borehole & tap on site	Tap on site (used neighbour's tap when site tap had a problem)	Tap on site	Tap on site
<b>Access to seeds/seedlings</b>		LDU	FGF	Commercial nursery & own	Abalimi	QPC	Abalimi	Abalimi	Abalimi
<b>Crops grown/favoured</b>		SEE FIGURES I & II							
<b>Flowers</b>		✓	X	X	X	X	✓	✓	X
<b>Crop rotation</b>		X (not yet)	✓	✓	✓	✓	✓	✓	✓
<b>Intercropping</b>		X	✓	X	✓	✓	✓	✓	✓

**TABLE VI: USE OF CROPS**

	<b>Masizakhe Gardening Group</b>	<b>FGF-Parkwood community project</b>	<b>Sinethemba Gardening project</b>	<b>SCAGA</b>	<b>Quaker Peace Centre Nyanga Garden</b>	<b>Manyano Support Group</b>	<b>Masibambane Women's Group</b>	<b>Phatisanani Women's Gardening Group</b>
<b>Sale</b>	✓	✓	✓	✓	✓	✓	✓	✓
<b>Home consumption</b>	✓	✓	✓	✓	✓	✓	✓	✓
<b>Given away to others</b>	✓	X	X	X	X	✓	X	X
<b>Place of sale</b>	Garden	Clinic & commercial market	In township	In township & commercial markets	In township	In township & commercial markets	In township & commercial markets	In township & commercial markets
<b>Customers</b>	Local community	Local community & general public elsewhere	Local community	Local community & general public elsewhere	Local community	Local community & general public elsewhere	Local community & general public elsewhere	Local community & general public elsewhere
<b>Collective/ Individual sale</b>	Collective	Collective	Collective	Collective	Individual	Collective	Collective	Collective
<b>Distribution of benefits &amp; investment of proceeds in project</b>	No distribution - Proceeds used to buy further inputs	Individual salaries & garden inputs	Individual benefits proportional to contribution of crop for sale	Collective benefits managed by outsiders	Individual responsibility for marketing & financial management, therefore individual benefits	Collective benefits	Equal benefits distributed individually	Individual benefits proportional to contribution of crop for sale
<b>Most commonly sold crops</b>	Spinach, potato, cabbage, onion & tomatoes	All vegetables grown & flowers	Spinach, carrots, beetroot, cabbage & tomato	Lettuce esp. plus all other vegetables grown	Any, depending on produce in individual gardeners' beds	Spinach, turnips, onion, cabbage, potatoes, beetroot & carrots	As per SCAGA	As per SCAGA

Figure I: Crops most commonly grown by case study gardening groups

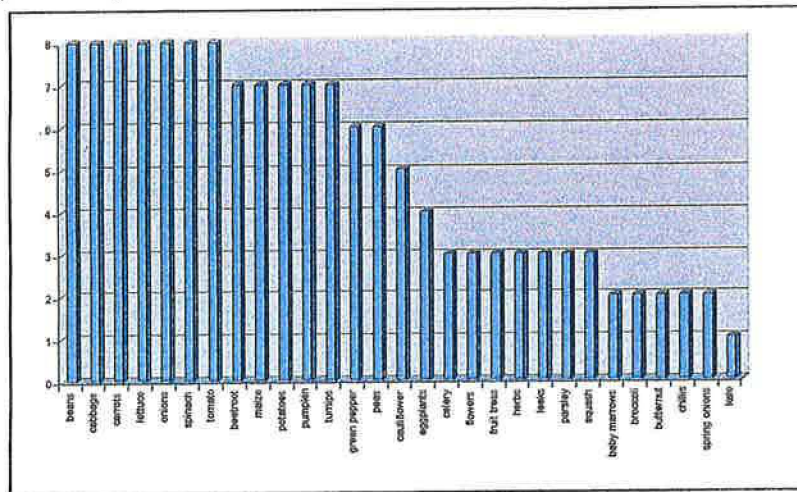


Figure II: Crops frequently favoured among gardening groups

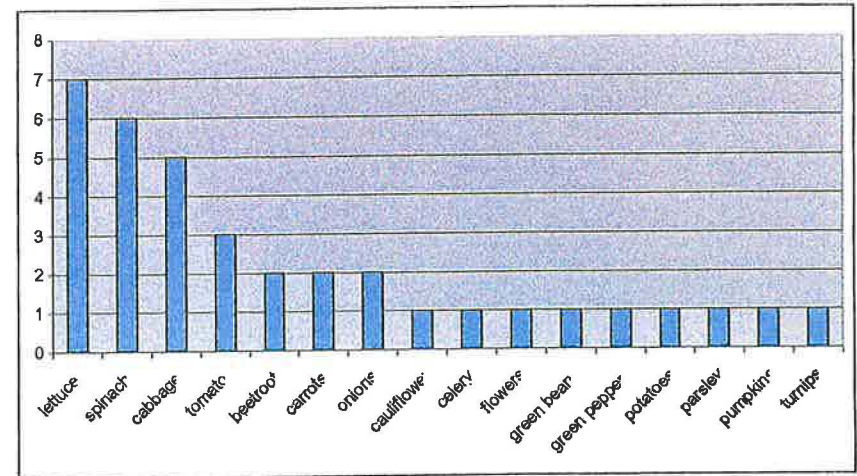


Figure III: Crops most commonly grown by home gardeners.

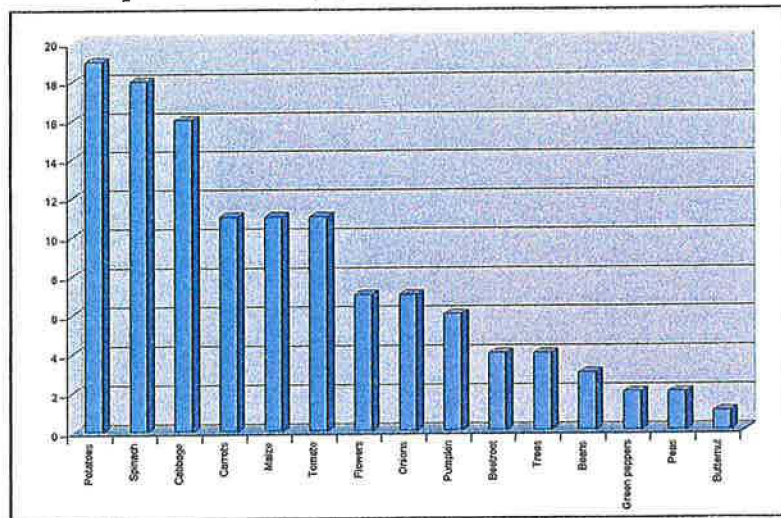
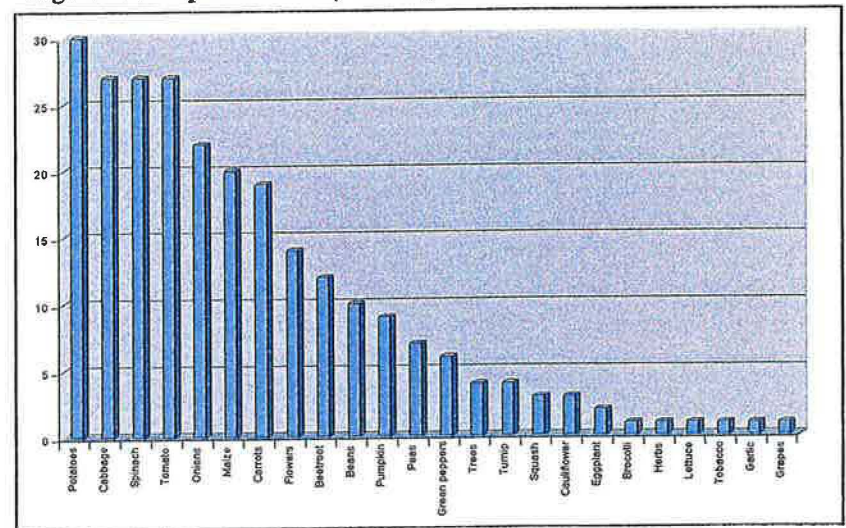


Figure IV: Crops favoured by home gardeners.





### **Home gardeners**

The results of household surveys conducted in three of the townships where gardening groups were interviewed yielded the following information:

35% of the sample households had vegetable gardens. Whilst amongst households with gardens the main reasons for having gardens was income and savings the most frequently cited reason for having or wanting a garden overall was the pleasure obtained from gardening, with household food security and sale of produce ranking third and sixth respectively. The majority of all households surveyed obtained access to land via government (i.e. local authorities). Most gardens were started more than two years after obtaining a plot.

60% of all residences sampled had at least one household member with previous experience in gardening. Trial and error was the most prominent sources of such experience amongst gardeners, followed by input of friends, family or neighbours, who collectively were also the important source of advice for gardeners. 24% of gardeners relied on NGOs for experience and/or training, which were also the most important source of soil improvers. Seeds and tools/equipment were most frequently obtained from commercial stores, with NGOs supplying 26% of gardeners with seeds.

Household expenditure on vegetables for those without home gardens was higher than for those with home gardens, even when exceptional figures (outliers) in the non-gardening sample population are discounted. The average expenditure on vegetables of non-gardening and gardening households were R27 and R19, £2.70 and £1.90 per week, respectively. Among gardening households, 58% of produce is consumed in the home, 28% gardeners sell crops at some time or another, and 14% give some of their crops to others.

The types of crops grown and/or favoured by home gardeners are illustrated in Figures III and IV. The most frequently cited problems experienced by home gardeners were pests (especially snails or the cabbage white caterpillars) and problems related to the sandiness of the soil on the Cape Flats. Aside from continuing to garden, the aspirations of home gardeners for the future included planting a greater variety of crops, selling their vegetables or starting other money generating activities. Many gardeners (74%) wanted to join a gardening group; 36% wanted to do so in order to learn more about gardening. 14% of home gardeners surveyed were already members of a gardening group. The attitude of neighbours and the local community towards home gardeners was, in all cases, strongly positive.

It would appear that home gardening is undertaken by families that are relatively poor but who nevertheless have sufficient resources (time, energy and/or money) to allocate to gardening. Decorative gardening is not restricted to the wealthier groups, but is more prevalent among those with a higher disposable income. The percentage of households interviewed with waged income was approximately 64%, with 40% of gardening households having a source of formal income compared to 77% of non-gardening households.



## 1. INTRODUCTION

This report is concerned with the status of urban agriculture in the Cape Metropolitan Area (CMA) of the Western Cape, South Africa. It focuses specifically on the nature of urban agriculture<sup>2</sup> in the Cape Flats area and explores the conditions that influence the extent of urban agriculture in low-income township areas situated on the Cape Flats. A primary focus of this research is the socio-political and institutional context that affects the practice of urban and peri-urban farming, specifically vegetable production, in the CMA.

Proponents of urban agriculture in Post-Apartheid South Africa argue that farming in the city and surrounding peri-urban areas is a resourceful and productive use of the urban environment. These supporters of urban agriculture state that the benefits associated with urban agriculture include income-generation, poverty alleviation, food security for households, greater self-reliance, wealth, job creation, proximity to markets for perishable goods, and environmental sustainability (Mohamed, 1999:2&3). Katzschner (1995) also noted that urban agriculture is a strategy for biological management and recycling of urban waste. However, these benefits have not been empirically verified, and further research is needed.<sup>3</sup>

In order to address these shortfalls and gaps in knowledge, and to contribute to the debate on the value of urban agriculture, the following report explores the extent to which vegetable production is being practiced and promoted in the Cape Flats townships. It discusses the broader socio-political and environmental context of urban farming in the Cape Metropolitan Area, as well as the policy and planning frameworks (both national and regional) that shape urban agriculture practices in the Cape Flats townships.

## 2. RESEARCH DEVELOPMENT

The following two sections outline the broader research context within which the report is located and the methodologies that were employed during the research.

### 2.1 Survey Context

This research is part of a four year EU funded project that commenced in November 1997. The project is a joint research program undertaken by the Institute for Biological and Experimental Technology (IBET) in Portugal, the Agricultural Research Council (ARC), South Africa, Eduardo Mondlane University, Maputo, Mozambique, the University of Zimbabwe, Harare, Zimbabwe, The University of Namibia, Windhoek and the Natural Resources Institute, University of Greenwich, United Kingdom.

The overall aim of the EU funded project is to develop the economic, scientific and technological means to expand income-generating vegetable farming activities in urban and peri-urban areas in southern African countries. Interdisciplinary soil, micro-biological, environmental, agronomic and socio-economic research is being undertaken to create

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<sup>2</sup>Urban agriculture has been defined as 'any activity that produces food within an urban area' (Eberhard, 1989:2). It entails the 'growing of food and non-food plant and tree crops and the raising of livestock (cattle, fowl, fish, bees), both within (intra-) and on the fringe or urban areas (Mougeot, 1994, cited in Mohamed, 1999). Urban agriculture may be on-plot, off-plot or peri-urban, and may be soil-based (e.g. vegetable growing) or non-soil based (e.g. poultry). This study is specifically concerned with soil-based vegetable production.

<sup>3</sup>Indeed, in a study conducted by Eberhard (1989) the extent to which urban agriculture is an economically viable activity for Cape Town was questioned.

methodologies and to establish design criteria allowing for improved resource management in peri-urban and urban areas. The results should provide guidance for policy formulation at regulatory and institutional levels to improve market-driven food security in informal settlements and urban communities in southern Africa. The research program consists of four main areas;

- a) household water and waste treatment processes (IBET, Portugal, South Africa, Namibia),
- b) low cost, high efficiency irrigation technology (Zimbabwe and South Africa),
- c) soil, water, plant interactions and intercropping systems (South Africa, Zimbabwe, Namibia and Mozambique) and
- d) socio-cultural, economic and institutional issues (NRI, UK).

This report deals specifically with the latter component, i.e. socio-cultural, economic and institutional issues, with the intention of providing an understanding of the socio-economic context of urban and peri-urban agriculture in the Cape Flats. It aims to explore the issues and to identify some of the constraints and opportunities relating to urban agriculture's development and sustainability both in this region and elsewhere. This report supplements and compares findings with a similarly focused survey carried out in Mamelodi, Pretoria during November/December 1998 and February and August/September 1999.

## **2.2 Methods**

### **2.2.1 Introduction**

As set out in the project brief, the tasks for this research included the following:

The first task (D1) was to understand the social structures and farming systems in urban and peri-urban communities, including:

- Stakeholder analysis to identify different interest groups;
- Description of current land uses, management and decision making;
- Identification of people's values and perceptions relating to farming and land use.

The second task (D2) was to explore the institutional relationships between urban/peri-urban agricultural groups and local government bodies and planning processes, including:

- Interaction between peri-urban communities and local authorities - channels and structures, attitudes and perceptions;
- Urban land tenure - access and security;
- Planning processes, legislation and regulatory frameworks.

This report is mainly based on information gathered during fieldwork conducted in and around the Cape Metropolitan Area (CMA), South Africa, during August 1999– January 2000. The fieldwork component of this research included the following areas of focus:

- A description of the urban farming systems in selected areas of the Cape Flats, covering land use, tenure, household garden production - crops, methods and inputs, motivations for urban agriculture, use of products, soil management knowledge and technical advice, priorities of different stakeholders for use of urban space.
- An analysis of social structure - interest groups, formal and informal organizations in urban communities, community representation and sources of livelihoods.
- Analysis of development planning policy of local authorities and town planners with regard to land-use and the interactions between local communities and local government.

### **2.2.2 Survey Approach**

Given the diverse objectives of understanding the social and institutional context and people's perspectives on and motivation for urban agriculture, the methodologies chosen for the survey

were varied. The first task was to identify stakeholders, past research and current activities. Information was gathered first through a secondary resources survey, and then by fieldwork that incorporated the use of questionnaires, semi-structured interviews, informal interviews with respondents and key-informants, participatory observations during field visits, sketch maps of project sites and house compounds, and transect walks.

For the background survey several documents were consulted, including those documenting the results of research previously conducted on urban agriculture in and around Cape Town. Government publications with implications for urban agriculture, such as policy documents and planning frameworks, were also reviewed. These documents provided useful information on the broader context of urban agriculture in Cape Town and on specific issues relating to the local socio-political context, policy matters and the economics of urban agriculture in CMC (see References below).

Two workshops, which were organised by urban agriculture interest groups in Cape Town, were attended. The first was an urban agriculture discussion forum workshop, which included various representatives from local authorities, NGOs and farming groups in the CMC. The second was organised by Abalimi Bezekhaya (see section 4.2) as a strategic planning workshop to guide this NGO's work on urban agriculture in the year 2000. The workshops provided opportunities for identifying stakeholders and observing the issues and concerns facing practitioners and local authorities with respect to urban agriculture in Cape Town.

### **2.2.3 Meetings**

After key-informants were identified, such as NGO workers, community leaders, government officials, researchers, and staff from the University of Cape Town and the University of the Western Cape (see Contacts List, Appendix 1) meetings were held. The key-informants' perceptions of urban agriculture in Cape Town and the influence that they or their organisations have on the practice of urban agriculture were elicited at these meetings which also helped to identify existing urban agriculture projects. In some cases, the meetings were followed by field visits to urban farming projects with which the individual or institution was involved. During these meetings semi-structured interviews were held, guided by a topics lists (see Box 1.1).

#### **Box 1.1 Checklist for meetings with organisations/institutions**

- Role in relation to urban agriculture (e.g. govern, support, facilitate etc.) & focus (eg. UA, township greening, grassroots involvement vs. training)
- Structure of organisation and financial basis for operation
- Conceptual understanding re. Relationships, especially in terms of relationship to local communities (including communities' perspectives)
- Past experiences: problems with activities in which involved, failures/successes of programmes
- Perception of benefits/problems relating to urban agriculture
- Perceived needs for improved land use, successful urban agriculture, community involvement etc.
- Future plans and requests for research/donors to meet these future plans

### **2.2.4 Case Studies**

Following a preliminary survey of urban agriculture projects in the CMC, particularly in the Cape Flats area, a sample of projects were selected for further investigation as case studies for this research project. The projects were not randomly selected. Rather, they were selected based on their location (within the Cape Flats area but in different localities) and the NGOs

that support them. It was the aim to profile at least one project from each NGO operating in Cape Town in the case studies. However, there were exceptions due to differences in the availability of staff in some NGOs to participate in this research. The organisations that participated in this research and their activities, structure, perceptions and plans are described in section 4.2.

### **2.2.5 Farming/Gardening Group Questionnaires Used for the Case Studies**

Questionnaires were used during the interviews with the farming groups in each case study. These questionnaires were based on the checklists used by Oudwater *et al* (1999) (see Appendix 2) during a similar study conducted in Mamelodi, Pretoria. However, the format of the questionnaire remained dynamic and was therefore constantly evolving over the period of the research. A copy of the questionnaire used is contained in Appendix 3. The questionnaire format was adopted in order to facilitate the co-operation of members from the supporting NGOs who seemed to prefer this format to a checklist.<sup>4</sup> The questionnaires were usually administered with the majority of the group members present, although in some cases this proved problematic<sup>5</sup> and meetings were held with individual members as representatives of the group instead. It was often the case that the chairperson of the group, who was in most instances also more fluent in English and better educated, dominated the meetings.<sup>6</sup>

### **2.2.6 Site Visits and Transect Walks**

A site visit was also conducted to all but one of the projects.<sup>7</sup> Diagrams were drawn of the various gardens, illustrating the layout of the garden and what crops were being grown at the time. These diagrams are denoted in Section 5. Subsequent to this preliminary survey, transect walks were conducted in order to understand characteristics of households in the vicinity of the project, the household's attitude to vegetable cultivation and whether proximity to the project influenced household urban agriculture.

During the transect walks, at selected households (see 5.2 for selection criteria), if the residents were present and willing to talk, interviews were conducted using a questionnaire (see Appendix 4). The transect walk task included mapping the physical layout of the research areas and the way people organised their plots. Transect walks also facilitated a random selection of respondents, some of whom were not involved in any type of urban agriculture. Therefore respondents of the transect walks can be considered as a more representative sample of Cape Flats practices, as most others interviewed were selected because of their involvement in urban agriculture. A summary of the transect walks, including sketch maps, is in Section 6.

## **2.3 Limitations**

This research project was limited by a number of factors including:

### **2.3.1 Time Constraints**

The time period for the project was limited to a period of five months, from September 1999-January 2000. This research period proved to be restrictive and ideally a full cycle (i.e. one

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<sup>4</sup> The reason for this would appear to be familiarity with administering questionnaires in past surveys conducted by NGO workers. It would seem that the questionnaire format is preferred because it provides a strict guideline regarding the questions to be asked, and also provides space for recording the responses.

<sup>5</sup> This was especially the case when group activities had ceased or when members declined to attend meetings.

<sup>6</sup> Although care was taken to elicit group opinions, it must be noted that these individuals expressed more opinions than others (see section 2.3.2 below).

<sup>7</sup> The site of Case Study 3 was not visited since the group have discontinued their activities for the time being

year) would have been preferable. In addition, the time which respondents were willing to spend discussing their activities was restricted according to their other commitments, and varied to some extent between groups, resulting in differences in the detail of data collected for various case studies.

### ***2.3.2 Language & Cultural Influences***

Most of the research was conducted in the medium of English, although the respondents in one case study preferred the medium of Afrikaans. In some instances, the assistance of NGO staff and local community members was requested for translation between English and Xhosa during site visits, group and household interviews. Despite these efforts to accommodate language differences, it should be noted that respondents who could speak and/or understand English were most likely to communicate with the researcher than those who could not. An individual's ability to communicate in English, and the associated degree of education of the different respondents, may be assumed to have influenced the results of this study, as may the interpretation of spoken communication in the context of cultural influences such as male/female stereotypes, traditional customs and taboos.



### 3. URBAN AGRICULTURE IN THE SOUTH AFRICAN CONTEXT

#### 3.1 National Context (South Africa)

##### 3.1.1 *Reconstruction and Development in Post-Apartheid South Africa*

As in most of the developing world, South African urban areas have historically been better served than rural areas with the rich having greater access to services than the poor. However, unlike elsewhere, differential access to services pre-1994, also corresponded to legislated racial divisions. For instance, nearly all white households had electricity, compared to less than 40% of black households. The legacy of apartheid included approximately 12 million without clean drinking water, 8 million in 'squatter' shacks, an estimated 12 million illiterate and over 20 million unemployed.

The Reconstruction and Development Programme's (RDP) aim to redress the racial inequities in access to services was initially conceived of as achievable by the post-apartheid Government, since South Africa's political transition had resulted in an influx of aid and development resources.<sup>8</sup> However, within a year of the 1994 national elections, problems in attempting to realize the RDP's development targets became evident, and it was suggested that: *Development in South Africa is becoming an increasingly murky affair* (Foundation For Community Research (FCR), 1994:161). Service provision goals began to appear overly optimistic, with problems of delivery compounded by the country's culture of non-payment for services. The poor performance of the formal economy exacerbated difficulties with the major productive sectors – manufacturing, mining and agriculture – failing to achieve the required output.

In 1995, since service provision targets appeared unachievable, the Government advocated a policy of self-help known as Masakhane (Work Together). A tempering of expectations was urged, and original development objectives amended. Housing, for example, was now to be subsidised, rather than paid for, by the Government, as only 42,115 houses had been constructed by mid-1995 and few other services provided since the elections. Whilst the commitment to an expansionary infrastructure programme to redress service deficiencies was reiterated in the Government's strategy document (GEAR South Africa, 1996) by 1997 Masakhane was also judged to have floundered. Nevertheless in some urban areas the spirit of Masakhane was manifested in small scale urban agriculture projects.

##### 3.1.2 *Agriculture and Wealth in Post-Apartheid South Africa*

South Africa is a middle income country but despite this wealth (relative to much of Africa) the experience of many South African households is vulnerability to poverty manifested in food insecurity, unemployment, violence and ill health. Access to sufficient nutrition is enshrined in the new South African constitution with the State taking measures to ensure that the marginalised meet their food needs.<sup>9</sup> The White Paper on Agriculture (1995) addresses both national and household food security with the Reconstruction and Development Programme (RDP) and the Growth, Employment and Redistribution strategy (GEAR)

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<sup>8</sup> According to South Africa's Foundation for Community Research this was because, the country constituted one of the: *last remaining areas for the triumph of the spirit, an opportunity for the downtrodden to take the reigns of power and through the curative regimen of liberal democracy, work hand in hand with those who oppressed or profited by oppression to overcome the 'cynical determinism' of materialistic history* (FCR, 1994:216). This, however, was arguably simplistic, as much of this influx of resources was linked to investment potential. For instance, Garner (1993), in a report of direct investment inflows to South Africa, noted that the Government proposed investment incentives and tariff protection schemes favoring foreign investment.

<sup>9</sup> For example school-feeding schemes, see Box 5.1. Success in meeting this aim is variable.

providing a strategic framework to achieve food security. Until elections 1994, it was difficult to work developmentally in the townships, so pre-1994 the focus was on survival (i.e. household food security). Since 1994 South Africa has not only undergone political change, but the population has grown and migration to some areas including the Western Cape, has been amongst the highest in Africa. As a result, food, land and water resources are under increasing pressure - a factor compounded by the uneven distribution of wealth and resources.

In the past, attention to national food security and irrigation for commercial farming in South Africa has been extensive, but little attention was paid to household water and food security. Consequently, whilst South Africa is an exporter of food, her people have remained vulnerable to food insecurity with women, children and the elderly being most at risk. One of the fundamental problems of food security initiatives is the lack of institutional capacity in poor areas where there is often also a lack of representation, training and organisational structures. These factors are investigated in the case studies detailed in later sections of this report.

### **3.2 Regional Context: (The Western Cape and Cape Metropolitan Area)**

South Africa has five major ethnic groups and a total population of approximately 40 million. The country's varied topography, environments and climate, as well as the repercussions of apartheid, rendered this populace unequally dispersed. Under apartheid, there were ten labour reserves known as Bantustans or Homelands and, although these were dissolved with apartheid, the resultant historic structures remained socio-politically and economically divisive.<sup>10</sup> Discrepancies in socio-economic conditions between the former Homelands and the rest of the country, contributed to extensive migration and, during 1994-6, one of the highest urbanisation rates in Africa (Meadows *et al*, 1997). The Western Cape experienced the highest influx of migrants because it was viewed as a region of opportunity. Cape Town, the main commercial centre, had the fastest growing tourist industry in Africa and consequently a perceived potential to accommodate semi-skilled service industry workers.<sup>11</sup> In reality, however, Cape Town's light industries (food processing, clothing and electrical goods) were on the decline and unemployment was growing. As more migrants moved into the Western Cape, the competition for space, resources and employment escalated. Moreover, aside from energy development (electrification), development was particularly limited in this region.<sup>12</sup> For instance, only 2,778 new houses had been constructed in the Western Cape by mid-1996, the third lowest regional figure.<sup>13</sup> Therefore, to accommodate the influx of migrants, informal settlements continued to proliferate, particularly in peri-urban areas, with an accelerated land use shift from agricultural to urban.<sup>14</sup> While this mirrored the situation in other developing countries, migration and 'squatting' in the region had its own peculiarities, discussed below.

<sup>10</sup> These "homelands" were rural slums that served, *inter alia*, the labour needs of white South Africa. Consequently, a separation of income generation (urban employment centres) and social abode (largely rural residential areas) occurred.

<sup>11</sup> See Wesgro Information Services, Saldru/World Bank Project for Statistics on Living Standards and Development of the Western Cape (1994).

<sup>12</sup> The local governing National Party argued, that this was because the ANC had not won in the region during the 1994 national elections and hence central government funding was restricted due to political rivalry. However, other factors, such as local government organisation and limited construction infrastructure, were contributory (South African Institute of Race Relations, 1996).

<sup>13</sup> The highest being 11,388 in Gauteng, the lowest being 1,168 in the Eastern Cape, with the national figure at 42,165. Meanwhile, Morkel (1998) estimated that the housing needed to meet population growth by 2010 in the Western Cape alone, was approximately three million units.

<sup>14</sup> Horner (1983) shows that this was not a recent development - in 1981 there were 21,600 'families' squatting in the region.

### **3.2.1 Socio-Economic Status**

The Western Cape has the highest Human Development Index in South Africa.<sup>15</sup> The rate of unemployment in the Western Cape compares favourably to the national average (17.3% compared with 32.6%) and the level of personal income per capita is higher than the national average (PDC, 1996). Overall, the Cape Metropole district has the highest level per capita income. However, it also contains some of the poorest sub-districts in the region. Thus, these statistics average out a high level of inequality both between geographical area and different population groups. The metropolitan area of the Western Cape accounts for 62% of the economically active population of the region. This area, which comprises the district councils of Belville, Cape, Goodwood, Kuilsriver, Mitchell's Plain, Simonstown, Somerset-West, Strand and Wynberg, is also the least agriculturally productive area of the Western Cape. Agriculture, forestry and fishing combined contribute less than 3% to the total output of the CMA's economy (CMC, 1999: 168).

### **3.2.2 Agriculture**

The Western Cape is the most important agricultural area in South Africa, producing 23% of the total monetary value of South African agriculture. The horticultural sector is the most important, contributing 49% of the total monetary value of agricultural output for the region (PDC, 1996). However, in the Cape Metropolitan Area, poultry and eggs are the most important agricultural subsectors. According to the Constitution of South Africa, Act 10 of 1996, agriculture is one of a number of areas that is subject to concurrent national and provincial legislation. The Provincial Administration of the Western Cape has its own Department of Agriculture (see below). In terms of sections 151(3) and (4) of the Constitution, 1996, municipal authority is delegated to the local government level. The duties of local government include the provision of services to communities in a sustainable manner, and the promotion of a safe and healthy environment. Thus, the development of urban agriculture is affected by decision making at national, provincial and local level, although to various degrees.

There is a debate in the literature and practice of urban agriculture in Cape Town regarding the economic significance of food production at the household level. The seminal study on urban agriculture in Cape Town, which was done by Eberhard (1989) for the City of Cape Town, concluded that 'the value of food that can be produced by an average home gardener in Cape Town is economically insignificant' (Eberhard, 1989: i). Eberhard argued that 'even if overly optimistic estimates of yields and prices are used and the cost of producing vegetables is substantially lowered, home vegetable gardening cannot play an economically significant role in poor households in Cape Town in our time' (Eberhard, 1989:4). By contrast, Small believes that 'the role that urban agriculture has to play in the Cape Metropolitan Area is highly significant in terms of creating a supply of food for the family which procures substantial household savings' (Small, quoted in Sandler, 1994:28).<sup>16</sup>

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<sup>15</sup> The Human Development Index is a combined measure of life expectancy, income and literacy.

<sup>16</sup> The difference of opinion exhibited here may be explained by differences in experience and approach to the subject matter. Eberhard conducted a short-term, theoretical investigation, while Small is highly experienced in the social dynamics of urban gardeners, having worked in the field of urban agriculture for many years. Deductions about the economic "value" of urban agriculture are largely dependent on how the observer wishes to operationalise the subject. Eberhard appears to prefer the "household income", while Small has emphasised "household savings" generated by gardening. As Katzchner (1995:35) notes: 'there exist interpretation differences as to its [urban agriculture's] value' (see section 7.1.4 for further discussion on this topic).

### **3.2.3 Governance and Political Organisation**

The Western Cape is governed by the Provincial Administration of the Western Cape (PAWC), a regional governmental body that has its own constitution and can pass legislation, provided that it is congruent with national legislation. PAWC is an important land-owner in the Cape Metropolitan Area. Its budget is derived from the national state budget (CMC, 1999) and is used to provide basic services, and perform basic functions. The Provincial Administration of the Western Cape executes its powers and responsibilities through a number of departments. In terms of peri-urban agriculture it is the Department of Economic Affairs, Agriculture and Tourism that is of greatest importance.<sup>17</sup>

Within the Department of Economic Affairs, Agriculture and Tourism for the Western Cape is the Sub-directorate: RDP and Land Reform which is tasked with facilitating the development and support of small farmers. Its mission is *'the promotion of agriculture and rural development and the settlement of secure and independent farmers from previously disadvantaged communities in the Western Cape through professional and dedicated personnel.'* The main means of promotion, to date, has been via technical support and extension services, as well as through a working relationship with the national Department of Land Affairs whereby feasibility studies are conducted for planned new farmer settlements.

The sub-directorate's work has also focused mainly on projects at schools, in low-income areas, which have been driven by the local community and supported by the Department of Social Services. It has also worked in multi-disciplinary teams with other bodies concerned with agriculture and research, such as ARC, the LDU, The University of Stellenbosch and University of the Western Cape (UWC). The head of the RDP and Land Reform sub-directorate, Mr Paulse, believes that *'excellent working relationships'* have been established with these bodies (Paulse, 2000). With reference to relationships with local communities and urban agriculture NGOs, the sub-directorate prefers to work with well-organised groups but understands that this can often be difficult when it comes to urban agriculture. It is also department policy not to provide funds to any other organisation, although it does make available expertise to assist with the technical aspects of projects such as needs assessment and the installation of infrastructure. The Department has plans to further develop community-based urban agriculture projects in the future.<sup>18</sup>

## **3.3 Local Context: (The Cape Flats)**

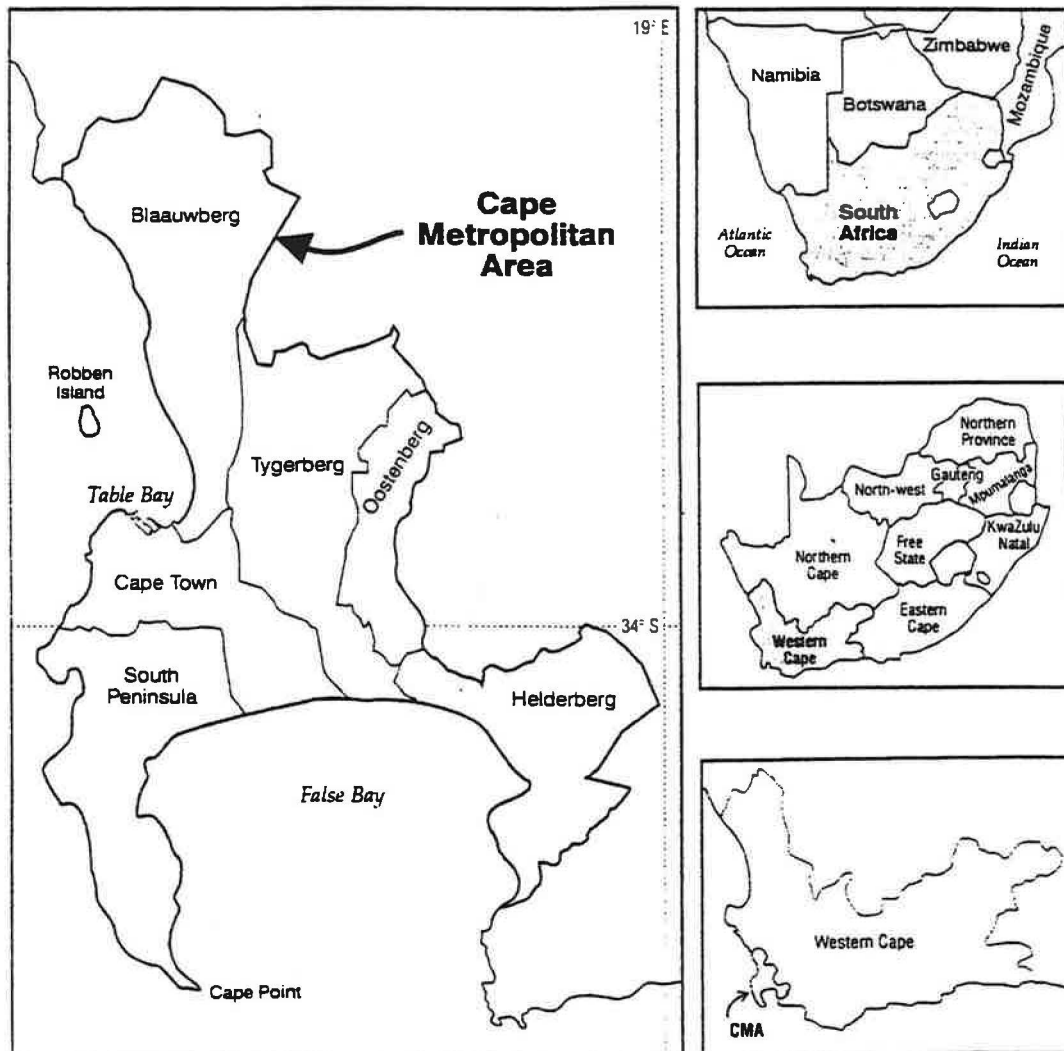
### **3.3.1 Geography and Environment**

The Cape Flats is situated in the Western Cape Province of South Africa, and is part of the Cape Metropolitan Area, the southern most metropolis on the African continent (see Map 3.1). It is a large low-lying area located between Table Mountain and the foothills of the Hottentots Holland mountains, lying between the suburban railway line to Simonstown, the main railway to Belville and Somerset West, and the False Bay coast.

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<sup>17</sup> It should, however, also be noted that the Department of Social Services is an important input provider for social 'upliftment' projects which may be of an agricultural nature.

<sup>18</sup> It is this sub-directorate which is responsible for the policy discussed in section 3.4.2b.



Map 3.1 The Cape Metropolitan Area, showing its position in relation to the southern African region, South Africa and the Western Cape Province. (Source: CMC [1999])



### 3.3.1a Soils, Geology, Hydrology

The plains of the Cape Flats extend from the Cape Peninsula to the Hottentots Holland Mountains in the east and Atlantis in the north. These plains, which cover some 630km<sup>2</sup>, are characterized by sandy, calcareous soils that have a low filtering efficiency. The soil in the area is relatively low in nutrients, although it is rich in calcium-carbonate. The high calcite content of the soil, which is also highly prone to leaching (particularly of potassium), results in very high pH values (pH 8-9) (Fermont, *et al.* 1998). Deposits of limestone and silica are also found on the flats. Owing to the low-lying nature of the region there is a high local water table, and the soils are often waterlogged during the rainy winter months. The Cape Flats aquifer is one of three in the region, and is of variable, to some extent unknown quality (CMC, 1999). Abstraction of water from the aquifer takes place on an *ad hoc* basis, and it is believed that illegal waste dumping poses a threat to this aquifer.

### 3.3.1b Climate and Rainfall

Wet winters and hot, dry summers characterize the Mediterranean climate of the South Western Cape. In summer, the prevailing wind is almost exclusively southerly; while in winter northwesterly winds prevail. These winds and other factors such as the mountain ranges and proximity to the sea influence the weather of the Cape Metropolitan Area. The average annual rainfall received on the Cape Flats ranges from 500mm to 800mm, which is less than that for other parts of the peninsula, which receive between 500mm and 2600mm annually. Cape Town International Airport, situated on the Cape Flats, receives 554mm p/a. The average daily temperature for the Cape Metropolitan Area is 28°C in mid-summer and 17°C in mid-winter (CMC, 1999).

### **3.3.2 Cape Flats Settlement History and Socio-Economic Characteristics**

Historically, settlement on the Cape Flats was avoided due to its exposed aspect and poor soils, with urban development occurring mostly on higher ground, along the foothills of the Cape Peninsula Mountains and the Tygerberg Hills (CPA, 1966). However, over the last 60-70 years, urban development has spread to the Cape Flats, a growth influenced by apartheid planning policies.

### 3.3.2a Communities in Transition – The History and Development of Settlements

In South Africa, 'squatter' settlements were not associated purely with urbanisation, although they were, and still are, an integral part of the process. In addition to controlling migration, apartheid restricted construction in urban areas,<sup>19</sup> but despite such controlling legislation, 'squatter' settlements proliferated.<sup>20</sup> In 1991, the Group Areas Act (1951) was abolished. Yet, despite the removal of controlling legislation, the racially segregated nature of households and settlements remained as graphic testimony to apartheid (see Appendix 5). Nonetheless, when many 'squatter'<sup>21</sup> settlements were granted legal status in 1994, a sense of permanence and 'community identity' began to develop. In the Cape Flats this sense of permanence was heightened by the new Government's promises of improved services, with a sense of identity also instilled through development initiatives.

In the Western Cape, removing apartheid's controlling legislation intensified, rather than alleviated poverty in some respects, as increased migration towards Cape Town, where

<sup>19</sup> See The Prevention of Illegal Squatting Act No.52 of 1951; the 1959 Trespass Act No.8; Act No.72 of 1977 which amended the 1951 Prevention of Illegal Squatting Act; and the Slums Act No.76 of 1979.

<sup>20</sup> See Mabin (1989) for a history of settlement development under apartheid.

<sup>21</sup> Hereafter known as 'informal settlements' see HSRC (1994) for definitions of 'squatter' and 'shack', informal settlements used for research in the Western Cape.

settlement had been previously restricted, exerted pressure on limited resources. Geographical and cultural aspects of the Western Cape had already made settlement here different to the rest of South Africa. While most Homelands were relatively close to the urban core, the Western Cape was far removed from the nearest Homeland and hence families moved to the region prior to the abolition of influx control. Furthermore, the Western Cape was one of the few places in the world where a mixed race population formed the majority in an otherwise African majoritarian context. These factors resulted in distinctive patterns of residential settlement. For instance, Langa township, which was built in 1927 and was the first African township in Cape Town, was designed to accommodate men only because the system banned African families from Cape Town. Consequently the African families that did migrate to the region 'squatted' on the urban periphery (Cole, 1987). Meanwhile Coloureds, who were already living in Cape Town, were removed from areas designated 'White' under the Group Areas Act and relocated to the urban periphery.<sup>22</sup> Thus the region developed enclaves of racial homogeneity, with Coloureds removed from inner-city, working class, slum areas – such as District Six – and Africans excluded by 'prevention of squatting' legislation. Africans and Coloureds were segregated into separate peri-urban communities which continued to proliferate due to the influx of migrants from rural areas – Africans from the Homelands and Coloureds from Western Cape farmlands.

### 3.3.2b Housing

Housing standards in Cape Flats townships vary, but generally are the lowest in the region. Typical forms of housing found in the Cape Flats townships are either informal or low-cost formal housing. In accordance with apartheid policies outlined above, the predominantly coloured areas were designed as dormitory towns in the 1970s and 1980s. However, in the 1990s the increase in the black population has seen the establishment of site-and-service township developments on the Cape Flats. Informal housing is also prevalent in many areas of the Cape Flats, where residents erect corrugated iron shacks and similar structures. Many of these are located within formal housing areas, in the backyards of already constructed houses. The high level of demand for the available land for the purposes of building accommodation is one of the constraints that has been identified for urban agriculture, since gardens require resources that could be otherwise utilized, creating high opportunity costs for township residents.

At the time of research, there was a government housing subsidy policy whereby families can apply for a capital subsidy of approximately R18 400, (KATE – insert pounds equivalent here) provided that they meet certain criteria. For instance, they must have South African citizenship, be married with dependants, and not have received a housing subsidy prior to application (Kuhn, pers. comm. 1999). However, the nature of the national subsidy scheme is such that it places constraints on the size of properties available, and this in turn puts pressure on the availability of space for activities such as urban agriculture.

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<sup>22</sup> However, Glover and Watson (1984) noted that while there was a restriction on 'Black Housing' in the region, this embargo did not apply to Coloureds for whom cheap housing strategies were devised, but nonetheless fell short of demand.

### 3.3.2c Population demographics and dynamics

In 1996, the population of the CMA was approximately 2.56 million<sup>23</sup> with three main population groups: Coloured and Indian (49%), Black (29%) and White (22%) (CMC, 1999). The City of Cape Town has the highest population density. The dependency ratio for the CMA is 52 and the gender ratio is 94, i.e. there are 94 males to every 100 females. About 28% of the population is under the age of 15 and 5% of the population is over the age of 64. The potential labour force is approximately 66% of the population, the median age of which is 26.

According to Cross *et al.* (1999) 24% of all last-moves recorded came from outside the CMA.<sup>24</sup> Migration into the CMA is composed of three main streams, each with a strong correlation to race group:

- young African migrants coming, primarily, from the Eastern Cape, in search of employment opportunities;
- mature pre-dominantly white, elite migrants who are retiring to the Cape.
- a steadily decreasing intermediate stream emanating principally from the impoverished interior of the former Cape Province, mainly composed of coloured families.

There is also evidence of a reduction in circulatory migration observed in families moving from rural areas, especially those in the Eastern Cape, although this does not mean that annual visits to homes elsewhere do not occur. Owing to the relatively more favourable profile of the Western Cape, in comparison to the Eastern Cape, increasing urbanisation is to be expected. In addition, the age of the first, young stream suggests that a significant natural increase in the black population is to be expected.

Within the CMA, the areas under the greatest pressure for new informal settlements are the eastern metro fringe areas, particularly on the Cape Flats. Movement between these townships and informal settlements accounted for over half of the movements within the CMA. The area originating the greatest movements internal to the CMA is the townships area comprising Crossroads, Nyanga, Gugulethu, Brown's Farm and Philippi (Cross *et al.*, 1999).

### 3.3.2d Political /government structures

The influence of the political realm on activities such as urban agriculture is highlighted by Eberhard's study (1989). Eberhard concluded that one of the obstacles to effective urban agriculture development was the political context which prevented '*the emergence of local leaders with broad democratic support who might facilitate community acceptance of the benefits of urban agriculture*' (Eberhard, 1989:7). Prior to 1994, while apartheid policies dominated national migration and settlement, civic movements controlled community organisation at the grassroots level. The South African National Civic Organisation (SANCO) emerged from the anti-apartheid struggle and acted as a gatekeeper, regulating the community's position within larger structural and external networks. SANCO held power in terms of community access and co-operation and, post 1994, its role was interlinked with community development. Development agents needed to deal with representative bodies and SANCO, therefore, evolved with the development process. This affected development in the Cape Flats, since achieving service needs depended on the negotiators.

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<sup>23</sup> 80% of all population growth in the CMA since 1975 has been accommodated in the townships on the Cape Flats (Japha, 1995).

<sup>24</sup> Cross, C., Bekker, S., Eva, G. (1999) En waarheen nou? Migration and Settlement in the Cape Metropolitan Area. Cape Metropolitan Council, Cape Town (see appendix A4).

In 1999, local government in the Cape Metropolitan Area, comprised a single metropolitan council, the Cape Metropolitan Council (CMC) and several metropolitan local councils (MLCs). The CMC deals with policy and programme decisions of a metropolitan significance, while the local councils are responsible for their own constituencies, having the full range of Local Municipal powers and functions that are rendered directly to the public. There are six local councils, namely City of Tygerberg, Blaawberg, Oostenberg, City of Cape Town, South Peninsula and Helderberg (See Map 3.2). The CMC is constituted through proportional (60%) representation of councillors from the MLCs, with the balance elected by political parties (CMC, 1999). The areas covered by this study fall within the City of Cape Town and City of Tygerberg municipal council areas.

The CMC defines its core business as:

- Establishing and implementing policy frameworks for effective urban management and an integrated community;
- Providing resources for equity and development;
- Providing metropolitan services for safe and habitable communities;
- Ensuring the necessary infrastructure to support a growing metropolis;
- Facilitating economic development strategies to alleviate poverty;
- Providing support for metropolitan local councils (MLCs) and for strong local democracy.

In accordance with the National Constitution, there are a number of co-operative governance arrangements that exist between the local, provincial and national spheres of government; and between government and civic society. These include the metropolitan co-ordinating forum, functional political and technical interfaces and co-operation regarding financial issues such as the annual setting of bulk service tariffs and the allocation of capital and operational grants to MLCs.

### 3.3.2e Employment Patterns, Income and Socio-Economic Conditions

Poverty and unemployment are widespread in the Cape Town area, particularly in the Cape Flats townships. Approximately 36% of the Black population, 29% of Coloureds and Indians, and 7% of Whites are unemployed. The proportion of blacks who are unemployed is higher than the national proportion of 29%. The average monthly household income for African households in Cape Town is approximately R1250, with almost the entire African population falling within the low-income category (Japha, 1995:7).<sup>25</sup>

Severe inequities exist between race groups with respect not only to employment opportunities but also access to sanitation, refuse removal and telephones within the CMA (CMC, 1999). Discrepancies between residential areas are clearly evident. The highest levels of overcrowding are to be found in Brown's Farm, Nyanga and Crossroads (CMC, 1999). The number of occupants per formal housing unit (with two or three rooms) in Gugulethu was believed, in 1993, to be as high as ten, or four per shack; while in Khayelitsha figures varied from nine per formal house to five per shack (Japha, 1995:21).

In informal settlements, about 2.9% of residents do not have access to water supplies within 50 metres of their homes (CMC, 1999) and in many areas there are inadequate sanitation services, resulting in direct infection and food contamination. Environmentally related diseases proliferate in these unhygienic conditions. Tuberculosis, in particular, is widely

<sup>25</sup> In Cape Town, the Household Subsistence Level (HSL) for a low income family of five was estimated, in 1994, to be R860 per month (see appendix A5a and A4b).



described as an epidemic in the Cape Town area, with between 110 and 890 cases reported per 100000 people per annum in 1988 (Japha, 1995). Instances of air pollution, water pollution, and uncollected solid waste exacerbate this situation.

### **3.4 Urban Agriculture, Land Use Planning & Policies**

Despite attempts made by national, regional and local government to consolidate development and planning activities, the practice of spatial planning in South Africa is in considerable disarray (DLA, 1999).<sup>26</sup> In Cape Town, there are a number of laws, bodies, policies and planning initiatives which have a significant influence on the planning context of the CMA, although the relationship between them is not always clear. Various legal and policy documents pertinent to this report are discussed below with reference to their implications for spatial planning as it affects urban agriculture in the CMA.<sup>27</sup>

#### **3.4.1 National Legislation**

In terms of the South African National Constitution, provincial planning is a functional area of exclusive provincial legislative competence, as set out in part A of Schedule 5 of the Constitution. National power to legislate with respect to provincial planning is circumscribed; whilst municipal planning and regulation of land development and management, are areas of concurrent legislative competence. In 1995, national legislation, in the form of the Development and Facilitation Act,<sup>28</sup> set out a number of principles for spatial planning and development, and introduced the concept of land development objectives (LDOs). A summary of the DFA's principles can be found in Box 3.1.

According to the Green Paper on Development and Planning, LDOs are plans that set out the development objectives and targets for development, and which outline the developmental imperatives for an area. LDOs are also sometimes referred to as Integrated Development Plans (IDPs). Some confusion surrounds the relationship between LDOs and IDPs since the concept of IDPs is separately dealt with in The Local Government Transition Act.<sup>29</sup> However, it would appear that the intention is for LDOs and IDPs to be seen as part of a single process of planning. Together, the Development and Facilitation Act and Local Government Transition Act, require that municipalities set LDOs and carry out IDPs.<sup>30</sup>

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<sup>26</sup> The National Development and Planning Commission, which was set up to advise the Minister of Land Affairs and the Minister of Housing has identified a number of problems that negatively affect spatial planning in South Africa. These include the lack of a shared vision, lack of inter-governmental co-ordination, lack of capacity and legal / procedural complexity (DLA, 1999).

<sup>27</sup> There are also a number of other laws, that are not described in detail here, but which have implications for development and land use planning in the South African context. These include the National Environmental Act, the Housing Act, the Water Services Act, and the regulations passed in terms of the Environmental Conservation Act.

<sup>28</sup> Act 67 of 1995.

<sup>29</sup> Act 97 of 1996. This piece of legislation requires a metropolitan council must formulate and implement an integrated development plan, while metropolitan local councils are to formulate local development plans that are in accordance with the overall metropolitan development plan.

<sup>30</sup> However, in the Western Cape, provincial legislation has not been enacted to give effect to the Development and Facilitation Act. This is partly as a result of political differences and rivalry between the national and provincial spheres of government. Instead, the province has opted to implement its own planning model, as contained in The Western Cape Planning and Development Act.<sup>30</sup> Nevertheless, the principles contained in the provincial Act are not unlike those of the National Act.



**Box 3.1 A summary of the principles contained in The Development and Facilitation Act No. 67 of 1995**

**1. All laws, policies and administrative practices affecting land development should:**

- Facilitate the development of both formal and informal, existing and new settlements - there is therefore no bias in favour of any one sort of development and no individual community or group in an area can claim preferential treatment without a good reason;
- Discourage land invasions without ignoring the reality and history of informal land development processes;
- Promote efficient and integrated land development that, amongst other things:
  - Integrates rural and urban areas, integrates poor and rich, black and white areas in towns and cities, and integrates different land uses rather than keeping them strictly separate;
  - Discourages urban sprawl and contributes to more compact towns and cities;
  - Makes maximum use of all available resources and avoids duplicating existing infrastructure and services;
  - Promotes development of housing and work opportunities near to each other, and
  - Encourages environmentally sustainable practices and processes.
- Be clear and easily understood - they should also provide guidance and information to people involved in or affected by the land development process, rather than simply trying to control the process and the people;
- Promote sustainable development that:
  - Is within the fiscal, institutional and administrative means of the country'
  - Established viable communities.
  - Protects the environment
  - Meets the basic needs of all citizens in an affordable way; and
  - Ensure the safe use of land

**2. Authorities in each sphere of government**

Must co-ordinate the different sectors involved in or affected by land development so as to minimise conflict over scarce resources.

**Source: Department of Constitutional Development and Department of Land Affairs (1997:23)**

### **3.4.2 National and Provincial Policies**

#### **3.4.2a The Department of Land Affairs's Land policy**

In terms of land policy, The National Department of Land Affairs is a key institution. This Department has been proactive in developing land development and reform policies that are geared to facilitate access to land by the poor and disenfranchised communities in South Africa. Its roles, responsibilities and duties are discussed in the White Paper on South African Land Policy (DLA, 1998) which places a special emphasis on land reform in South Africa. The department is, inter alia, responsible for land restitution and redistribution, land tenure reform, and land development. As part of the land reform process, and in line with its policy of facilitating access to land for low income groups, the department has a grants and services scheme that provides financial assistance to groups wishing to acquire land.<sup>31</sup>

The services that are provided by the Department include facilitation, dispute resolution training and capacity building. The grants available include the following:

- **A settlement / land acquisition grant**, to the value of R16000 per household, which can be used to acquire land, secure tenureship, invest in infrastructure, improve homes or provide investment capital for farming initiatives.
- **A grant for the acquisition of land for municipal commonage**, which may be applied for by local municipalities and be used to acquire land that will extend existing or create new commonage property for use by qualifying persons (envisaged to include groups such as the urban poor).

<sup>31</sup> The grants and services of the land reform programme are made possible by a number of laws, including the *Provision of Land and Assistance Act* (Act 126 of 1993) as amended, the *Land Reform (Labour Tenure) Act* (Act 3 of 1996) as amended, the *Restitution of Land Rights Act* (Act 22 of 1994) as amended, and the *Extension of Security of Tenure Act* (Act 62 of 1997).

- A **settlement planning grant**, which is available either for the preparation of applications by groups wishing to obtain funds under the settlement/land acquisition grant or for supporting beneficiaries of land restitution.
- A **grant for the purpose of determining land development objectives (LDOs)**, which is available for under-resourced, poor or rural local authorities to undertake strategic planning.
- A **restitution discretionary grant**, to the value of no more than R3000 per restitution beneficiary, which is to be used to enable the successful claimants to take charge of their land upon transfer.

Of particular interest, for the purposes of this study, is the Department's municipal commonage policy. The department believes that a reallocation of commonage property to poor residents, who wish to supplement their incomes with agricultural activities, can help to address local economic development while simultaneously providing an inexpensive land reform option (DLA, 1997). The policy is therefore intended to ensure that existing commonage land is made available for use by needy local residents on a leasehold basis. This policy aims to assist municipalities, who are responsible for managing commonage property, to make this land available or, where necessary, to acquire such land. To this end, the above-mentioned Grant for the Acquisition of Municipal Commonage has been made available. This grant is, however, primarily intended to be used in instances where the applicant does not have sufficient commonage property already. In cases where municipal commonage property exists, but is not accessible to a broad spectrum of local residents, and a need exists to make this land available, the Department will consider requisitioning such land. Alternatively, where leasehold agreements have been signed, the Department will also consider buying out the lease (DLA, 1997).

Decisions taken by the Department, especially with regard to land reform projects and the assessment of applications for funds, are taken in consultation with other departments. These include the provincial Departments of Planning and Agriculture, the Regional Office of the National Department of Water Affairs and Forestry, and the relevant local authority.

#### 3.4.2b The Provincial Administration of the Western Cape policy on the establishment of agricultural holdings in the Urban Fringe<sup>32</sup>

The Provincial Administration of the Western Cape has drafted policy with respect to land use for agricultural purposes. The policy document, which is divided into two sections, is still in its draft format, but includes policy statements regarding the establishment of agricultural holdings in the Urban Fringe (Province of the Western Cape, 1999). The policy refers primarily to peri-urban environments, but may also be applied to urban areas.<sup>33</sup> This policy is intended to 'create opportunities for aspirant farmers to access land and develop agricultural

<sup>32</sup> This policy was drafted by the sub-directorate for RDP and Land Reform in the Department of Agriculture: Western Cape. See section 3.2.1.

<sup>33</sup> The City of Tygerberg's draft policy (1999) on the Establishment of Urban Agriculture is virtually a replica of the policy document produced by the Provincial Administration of the Western Cape, except that it replaces general references to local authorities with specific reference to Tygerberg. This local municipality has been commended for its proactive approach in putting a policy in place to deal with urban agriculture issues. However, it has also been criticised for not achieving the aim of the policy statement. The Director of Abalimi has dismissed the policy as insensitive to the needs of the local situation, and inaccessible to local residents in areas such as Khayelitsha, because of procedural stipulations that require legally formed entities to act on behalf of local communities (Rob Small, pers. comm. 1999).

holdings', as well as 'explain how local authorities can manage the implementation of these opportunities' (Province of the Western Cape, 1999). The policy sees local municipalities as fulfilling a developmental role, and even as potential implementing agents for urban agriculture projects. The policy also refers to the grants available from The Department of Land Affairs for agricultural purposes, and it suggests that the provincial Department of Agriculture should be approached to assist local authorities in planning, developing and managing commonage property. However, its focus is not merely the local poor. The scope of the policy also includes commercial and corporate ventures and, irrespective of the type of farming venture proposed (i.e. commercial versus community-based projects), the policy line is that public land that is earmarked for disposal will be sold at market prices.

### **3.4.3 Land use planning in Cape Town**

In accordance with the requirements of the Local Government Transition Act, the CMC has drafted an Integrated Development Planning and Management Framework. The framework outlines the plan of action for the attainment of various goals/objectives relating to issues of metropolitan significance. Included in the list of key results targeted for 98/99' is the obtaining of statutory approval for the Metropolitan Spatial Development Framework (MSDF).

#### **3.4.3a The Metropolitan Spatial Development Framework (MSDF) and Metropolitan Open Space System (MOSS)**

The MSDF is essentially a guide for spatial development within the Cape Metropolitan Functional Region, which aims to provide for co-ordinated responses to planning and development in the CMA. Although others have indicated that there is no mention of a policy for urban agricultural activities in the MSDF (Thorgren, 1998:68), this important planning document does refer, broadly speaking, to agricultural land. The MSDF's Policy no. 46, relates specifically to Agricultural Land. It states that: *Development should generally be excluded from Metropolitan Agricultural Land, the exception being development specifically related to agricultural uses* (MSDF, 1996:69). The MSDF originated in 1991, with the final draft being produced in 1996 to provide a framework to guide the form and location of physical development and facilitate the restructuring and integration processes in the CMA (CMC, 1996). The MSDF contains a number of elements.

Firstly, it promotes the structuring of urban development along activity corridors and around major development nodes. In particular, it advocates the development of a major new node in Philippi East, to be known as the Philippi Centre. This is significant, since the area is one of the most agriculturally productive inter-urban spaces. The location of this development node on the Cape Flats, and its proximity to the low-income areas of many Cape Flats townships, is indicative of local authority efforts to increase employment opportunities for these areas. The attention that it receives from spatial planners, and the priorities attached by local authorities to different development sectors, will influence the future of urban agricultural activities in the area. However, the MSDF does emphasise that the Philippi Horticultural Area should remain untouched by urban development. The MSDF's Policy no. 47 states that: *Urban development should be excluded from horticultural areas.*

Secondly, the MSDF includes a Metropolitan Open Space System (MOSS) component which recognises the importance of open space in the urban area, although the identification of a network of open spaces in the CMA by the MSDF remains at a conceptual level. In principle, the MSDF promotes the protection of all land currently under cultivation within the CMA. It also advocates the restriction of urban development in areas with high and medium-high soil

quality. However, since agricultural potential is a function of more than just soil quality, the MSDF also recognises that water availability and service infrastructure may influence the viability of agricultural activities in certain areas. With respect to the use of urban open space for the purposes of urban agriculture, estimates indicate that it would be cheaper to develop urban vegetable gardens than parks in urban open spaces.<sup>34</sup>

Thirdly, the MSDF advocates increased densification of the urban areas as a mechanism for limiting urban sprawl. It also emphasises the maintenance of urban edges. These policies could have implications for the use of land in urban and peri-urban areas for agricultural purposes, where there is often direct competition with other land use demands, e.g. housing and other urban structures.

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<sup>34</sup> A comparison of development costs show that developing a 9 ha plot as a vegetable garden can cost approximately R0.9 million - R1.2 million, compared with R2 million for developing the same area into a park (Fermont *et al*, 1998:89).

## **4. URBAN AGRICULTURE ON THE CAPE FLATS**

### **4.1 Introduction**

Published knowledge regarding the extent to which urban agriculture is practiced on the Cape Flats is limited owing to a number of factors including little and locally confined research and inaccessibility of certain areas. However, the NGOs that support and promote greening of townships and agricultural practices on the Cape Flats have a wealth of knowledge about urban agriculture activities in the townships.<sup>35</sup>

Urban agriculture, in the Cape Town context, has been researched by several authors. Eberhard (1989) was among the first to investigate the potential for urban agriculture in Cape Town, and he concluded that urban agriculture is not an economically viable activity, although more recent investigations by Sandler (1994) and Beaumont (1995) suggest otherwise. Several studies have focused on specific study areas, and are primarily focused on vegetable production that is supported by local NGOs<sup>36</sup>. These studies investigate various aspects of urban agriculture, including the perspectives of planners with respect to urban agriculture, the effectiveness of NGOs in promoting urban agriculture activities, the needs and preferences of the NGOs' client base, and the motivations for and constraints to undertaking urban agricultural activities in the townships. The findings of these studies are referred to in the Discussion (see section 7) of this report.

The first stage of this study's fieldwork was to conduct a survey of NGOs and institutions involved in urban agriculture in Cape Town. Indeed, the preliminary meetings revealed that this was information that NGOs themselves requested in order to conduct their operations in a more co-ordinated manner. However, the limitations of this survey, as outlined above, meant that this survey was not definitive but it is hoped that Cape Town's urban agriculture NGOs can use these findings as a guide.

### **4.2 Urban agriculture and 'Greening' NGOs and institutions**

There are a number of organizations in and around Cape Town that are involved in supporting urban agriculture initiatives. Those that directly support grassroots urban agricultural projects, and in particular vegetable gardening, include:

- Abalimi Bezekhaya
- Tsoga (Wake Up) Environmental Centre
- The Land Development Unit (LDU)
- The Quaker Peace Centre (QPC)
- Food Gardens Foundation (FGF)

In addition to the locally based institutions and organizations, there are a number of other groups that are involved in and/or contribute to the development and facilitation of urban agriculture in the Western Cape and elsewhere. These include:

- The Kommetjie Environmental Awareness Group (KEAG)

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<sup>35</sup> The prevalence of livestock, especially cattle, along the N2 (the national highway crossing the Cape Flats) illustrates that township residents are involved in urban agriculture and stock farming activities. The highly productive horticultural area of Philippi, known as the Cape's "vegetable pantry" (Sandler, 1994:56) is also located within the CMA on the south western part of the Cape Flats. This area has been under cultivation since the 19<sup>th</sup> century and today it supplies Cape Town and surrounding environs with a variety of fruit and vegetables.

<sup>36</sup> It was found, during the course of this research, that studies were seldom inclusive of policy analysis and household surveys with garden projects frequently surveyed in isolation. This research sought to address this shortfall by adopting a more holistic approach.



- The Centre for Integrated Rural Development (CIRD)
- The Program for Land and Agrarian Studies (PLAAS)
- The PELUM Association (Participatory Ecological Land-use Management)
- The Agricultural Research Centre (ARC)

#### **4.2.1 Abalimi Bezekhaya**

Abalimi Bezekhaya, which means "Planters of the Home" or "Home Agriculturists", is a community-based non-governmental organisation with garden centres in Nyanga and Khayelitsha, on the Cape Flats. This NGO began in 1982-1983, as a Catholic Welfare Bureau project. It was originally known as the 'Farming in the City' project. Abalimi's primary activities are township greening and supporting organic subsistence gardening. Abalimi, is one of the most significant agricultural resources in the Cape Flats townships. In 1999, Abalimi had nine co-workers, seven of whom are fieldstaff, with three focussed on community outreach work.

Because of the need to expand Abalimi Bezekhaya's operations, a membership subscription to the centre was being considered in an attempt to achieve economic sustainability but there were problems, particularly since the client base is low income. Moreover, the system needed to be easy to administer.

Sites where Abalimi Bezekhaya operates include:

- 1) **Abalimi Bezekhaya township headquarters and Garden Centre, Khayelitsha:** Situated on the property of the Catholic Welfare Development Centre, this centre began operating in 1989 and is slightly removed from the local communities but Abalimi hopes to find more suitable premises in the future. Manure, seedlings, seeds and trees are the center's biggest turnover. Training courses are also run at the centre, which has a demonstration garden and nursery.
- 2) **Abalimi Bezekhaya, Training and Resource centre, Nyanga-Gugulethu-Crossroads-Philippi epicenter:** This centre was started in 1986 and is located on the property of a government clinic in close proximity to a major transport terminal and market centre in Nyanga township. Here community members are able to access training for growing of vegetables,<sup>37</sup> as well as buy subsidized seeds and manure.<sup>38</sup> The aim of the centre is to help those in need of livelihood alternatives, and it is the busiest of Abalimi's centers, in terms of individual use patterns.<sup>39</sup>

Some of the resources provided by these centres are taken back to the rural areas by people living in the townships who have access to rural land to which they return for various reasons.<sup>40</sup> There is therefore a possibility that urban agriculture can influence

<sup>37</sup> The centre trains approximately 300-500 people annually.

<sup>38</sup> A bucket of compost costs R1, 50, and seedlings cost approximately R2, 00 each.

<sup>39</sup> The annual turnover of the centre is approximately R70000-100000 (£7-10K), and between 1000 and 5000 people are supplied with support services and products each year. At the operational peak of the centre, there were 11000 transactions, servicing approximately 8000 people.

<sup>40</sup> In a study of peri-urban settlements in the Cape Peninsula Meadows (1998) found rural-urban linkages were maintained due to insecurity of employment, violence, health and education, social interaction and social cultural tradition as well as difficulties in accessing services in urban areas. Over a quarter of respondents in her survey (28%) said they were returning to the Homelands (rural areas) due to family ties and cultural attachments to land, as well as due to the cultural dislocation associated with alcoholism, depression and violence and 'people still identified with their rural roots.'

rural areas with returnees to the rural areas starting agriculture projects there.<sup>41</sup> This highlights the importance of adaptable (and transferable) technology and training.

**3) Community allotment gardens (CAGs):**

Examples of these CAGs include the Siyazama Community Allotment Garden Association (SCAGA) in Khayelitsha-Macassar; the Manyano Support Group in Khayelitsha, the Masibambane Gardening Group located at Siyazakha Primary School, Brown's Farm, Nyanga and the Phatisanani Women's Gardening Group (See Case Studies 4,67, and 8 below)..

**4) The Hazeldean communal flower-growing venture.** This project is still in the planning stages, and comprises the commercial growing of Arum lilies combined with vegetable gardens. Abalimi is assisting with the project, which is an initiative of the Homeless People's Federation.<sup>42</sup> The project will be located on a recently acquired farm that was obtained using a subsidy provided by the National Department of Agriculture. The area is very waterlogged, and is going to be drained, while the old farmhouse will provide an urban agriculture training centre and conference facilities.

The director of Abalimi, Mr. Rob Small, is very supportive of collaborating in research projects and as such Abalimi has a high profile amongst donors as well as township residents of Khayelitsha, Langa, Gugulethu and Nyanga. Abalimi operates by establishing pilot projects and supporting them until they become institutionalised (after approximately 3-7 years). Thus, to establish a self-sustaining program, funding for 2-3 years is considered to be insufficient. The director of Abalimi believes that:

*'Community group development requires more time and money but funders require proof that something is developmental, and often don't realise that there are hidden developmental indicators. Developing useful development indicators for urban agriculture is necessary.'*<sup>43</sup>

#### **4.2.2 Tsoga Environmental Resource Centre**

Tsoga, which means 'wake up' in Xhosa, is a community-based non-governmental organisation in Langa township. The centre has a number of programmes that are geared towards the increased environmental awareness of previously disadvantaged local communities. These programmes include community development and outreach, a youth programme and a literacy project. The community development and outreach programme has a number of components, including food gardening, township greening and the use of school gardens for environmental and outcomes based education purposes. Tsoga also has a nursery and demonstration food garden on its premises. The schools programme encompasses four schools, namely Zimasa Community School, Moshesh Primary, Siyabulela Primary School and Mokoena Primary. Plots have been made available at some of these schools for pupils and teachers to learn and practice cultivation methods, including permaculture. Educational tours have also been organised to expose scholars to environmental and socially significant sites in

<sup>41</sup> However, research by Cross *et al* (1999) suggests that circular migration has declined with the traditional circulation of migrants to and from the Eastern Cape greatly decreased, with most opting to stay in the Cape Metropolitan Area (CMA). The study revealed that the stream of migrants to the CMA has slowed from 57 000 between 1989 and 1993 to 49 000 from 1994 to 1998. More recently, almost half the migrants to the CMA have been people without dependents, who come here to retire (Cross, *et al*. 1999).

<sup>42</sup> The Homeless People's Federation is a nation-wide community-driven voluntary initiative that assists people to obtain land and housing by application to the relevant authorities and government structures. Membership is acquired by becoming a member of a savings group.

<sup>43</sup> Rob Small, Director of Abalimi Bezekhaya, pers. comm.1999.

and around Cape Town, for example excursions have been organised to visit Robben Island, Kirstenbosch Botanical Gardens, and the Cape Peninsula National Park.

#### **4.2.3 The Land Development Unit**

The Land Development Unit was established in 1992 as an independent organisation for the support of disadvantaged smallholder farmers and growers in the Western Cape. It is based at the University of the Western Cape and is actively involved in supporting and promoting urban agriculture and environmental awareness, particularly in schools. The LDU started working with vegetable gardeners in townships on the Cape Flats in 1994, and has a number of training courses and projects, each with varying success in implementation. Examples of the LDU's urban agriculture projects are:

- 1) **The Izameza Bantu Vegetable Gardeners Group**, whose gardens are located on the premises of The Red Cross Society in Nyanga. Participants in this project are a group of outpatients, of between 20 and 24 people, whose ages range from 20-32, and who have had no previous experience with agriculture. The project was initiated by Mrs Mayba, the sister-in-charge, who motivated the group to start doing something for a living in the manner of Masekhane. The vegetables are grown for consumption and sale.
- 2) **The Masizakhe Vegetable Gardeners Group**, whose gardens are located on the grounds of an Apostolic Church premises at New Crossroads. This project is primarily a youth project that involves 15 young men and women who received training in vegetable production and initiated the project (see Case Study 1).
- 3) **The Kraaifontein Community Garden project in Scottsdene**, located at Parkdene Primary School. The community has been granted access to the school's land, for use by a vulnerable group of approximately 18 unemployed individuals, 12 of whom were previously farm workers.
- 4) **Bencquani Makhosi kazi**, at Gugulethu's Luzuko Primary School. This project is for a group of 10 women who have previous agricultural experience of farming in the homelands, and who initiated the project themselves.

The LDU has experienced a number of problems with urban agriculture projects. For example, a lack of motivation amongst target populations, such as outpatients who do not have the energy to participate in strenuous gardening activities. In some instances, it has taken a long time to obtain the necessary permission to use urban land area for gardening. Problems have also arisen due to the lack of continuity and loss of momentum that results when active individuals/community workers leave the unit.

#### **4.2.4 Quaker Peace Centre**

The Quaker Peace Centre (QPC) is an NGO concerned with peacemaking and community development.<sup>44</sup> QPC does not wish to see itself as a major service provider, running lots of gardens. Rather, it would like to assist others (such as the RDP or churches) to run gardens on their own. This NGO established the oldest existing communal vegetable garden in Khayelitsha. The Centre's vision includes:

- Capacity building of communities
- Improving equality
- Improving equity

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<sup>44</sup> The Mission Statement of the Quaker Peace Centre reads: *'The Quaker Peace Centre is a team of peacemakers working with people towards a way of life which encourages the creative, non-violent resolution of conflict through promoting awareness, co-operation and empowerment.'* (Annual Report 1998, Quaker Peace Centre, Cape Town).

- Being practically sustainable; and
- That any development should be initiated by a community or involve intense community participation.

QPC runs six programmes, namely community development, rural support, conflict handling, mediation and skills training, workcamps and a youth programme. QPC supports three community gardens under the auspices of its community development programme, and has been actively assisting backyard gardeners since 1989. QPC sees the development of community gardens as a healthy alternative to handing out food parcels, because the garden provides people with an opportunity to provide food for themselves while retaining their dignity.<sup>45</sup> The three QPC community gardens are located in the predominantly Xhosa-speaking areas of Khayelitsha, Nyanga and Gugulethu.

1. **The garden at Khayelitsha**, supports 80 gardeners, and is the oldest. It was established in 1992 on Presbyterian Church land as the result of conflict resolution efforts in Khayelitsha township. The garden has artificial windbreaks and a micro-jet sprinkler system,<sup>46</sup> and has been supplied with trees from Infruitec-ARC. Compost is made on the premises, and training supplied to individuals interested in establishing home gardens. QPC would like to develop the potential of the Khayelitsha garden more fully, for example by planting a herb garden or teaching the gardeners how to preserve their produce. QPC would also like to see the church taking on more responsibility for the garden, but the lack of a minister at the church makes this difficult.<sup>47</sup>
2. **The Nyanga garden**, located on the property of the United Reformed Church, was developed in 1996 as a joint project between QPC, the RDP and local community organisations. QPC provided the community with expertise, while the RDP provided funds. However, the project is heavily subsidised by QPC. (See Case Study 5). The garden supports 113 gardeners.
3. **The Gugulethu garden**, which is adjacent to Gugulethu Park (the first public park to have been established in Gugulethu) was officially launched on 4 July 1998. The garden was developed by QPC after it was awarded the contract to do so by the Department of Public Works. The Gugulethu garden supports 60 gardeners.<sup>48</sup>

QPC focuses its recruitment activities for gardening on the unemployed. Ideally, QPC would like to see every unemployed individual having access to land where he/she can grow vegetables. At each of the community gardens, plots are farmed on an individual basis and may be reallocated, at the discretion of fieldworkers if, for example, gardeners leave the area or find employment. QPC employs staff at each of the gardens. In order to obtain access to a

<sup>45</sup> QPC has produced a handbook on community gardens to be used as a training manual entitled 'The Quaker Peace Centre's Community Gardens Handbook: Growing People while Growing Vegetables'. Indeed it was found from both the interviews conducted at the garden projects themselves and at the households (see below) that where members were involved in QPC elements of pride and empowerment were associated with being part of QPC.

<sup>46</sup> In the mid-1990s, QPC received a water bill of R14 000 for its Khayelitsha garden. At the time, government was actively combating the prevailing culture non-payment for services rendered through Masakhane. Although QPC had never before received a bill for the water used at the centre, it nevertheless undertook to pay the account. However, the experience prompted QPC to consider alternative sources of water for the community gardens, and each is now equipped with a borehole.

<sup>47</sup> According to Mr Routledge, the South African Council of Churches plans to have an extensive project in 2000, on focusing on the use of church land for vegetable gardening activities. QPC would like to see all available and under-utilised church land being used for community development such as vegetable gardening.

<sup>48</sup> The Quaker Peace Centre's manual on community gardens indicates that there are '1500 backyard gardens and 72 community gardens in Khayelitsha, 330 backyard and community plots in Nyanga, and 60 plots in Gugulethu' (Anon, 1999).



plot of land at the gardens, community members must hand an application to QPC staff, whereupon they are put onto a waiting list. QPC has considered developing a co-operative model of production at the gardens, but presently believes that the gardens are not big enough to generate the income required before justifying co-operative management.

QPC was also involved in setting up a community garden at a newly established formal settlement in Westlake, on the Cape Peninsula. At this development, the initiative of establishing a community garden arose with the developer, who requested the assistance of QPC in designing and creating a communal gardening area that would be integrated into the design of the development. The garden currently supports 25 gardeners, although there is uncertainty about the future nature of the garden. Ideas for its continued existence include making it into a demonstration garden to be used as a tool for training, or maintaining it as an area where community members can productively grow their own vegetables.

#### **4.2.5 Food Gardens Foundation**

The Food Gardens Foundation is a non-profit, non-governmental organisation established in 1977 in Johannesburg, with the aim of helping the very poor to provide essential food for themselves, following the motto "Maximum production in minimum space with minimum water" (Thorgren, 1998:51). Membership costs R5, 50p annually, per gardening club, and the foundation supplies seeds to members at very low cost. (See Case Study 2, Section 5).

#### **4.2.6 Other Organisations/Institutions**

##### **4.2.6a The Kommetjie Environmental Action Group (KEAG)**

KEAG is an environmental action group based in the peri-urban area of Kommetjie, on the Cape Peninsula. KEAG was founded eight years ago, by a small group of individuals and has been funded by a variety of sources to conduct work in two main areas: a) ecology and conservation; and b) permaculture and ecological land use. KEAG staff run permaculture courses in peri-urban townships and KEAG has a permaculture demonstration garden at their premises. Originally, KEAG had direct involvement in permaculture projects. However, much of their work had shifted to training trainers and capacity building. KEAG supports NGOs and others who work in their own communities or wherever they are responsible for reaching agricultural practitioners. Training is undertaken using a series of participatory workshops during which there are demonstrations and gardens are created with those being trained. KEAG's strategy for 2000-2003 is service provision in training and skills transfer to organizations or institutions involved in promoting small-scale, mixed agriculture projects. A specific focus is being put on the provincial level.<sup>49</sup>

KEAG has experienced a number of problems. These include lack of funds to support administration costs, difficult environmental conditions (including sandy soils and winter rainfall climate) and lack of KEAG staff who can be dedicated to project implementation. KEAG's permaculture director believes that all too often donor funding is short-term, and does not allow for future work, nor is there much flexibility in providing funding, especially when it comes to unallocated grants for administration purposes.

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<sup>49</sup> KEAG has recently expanded, and is now involved in the Eastern Cape, especially with the Umtati training project in Grahamstown and surrounds. There is also a satellite project at the coast, near Kei mouth where a community organised a site, and the necessary resources for an agriculture project, and then approached the Umtati project for training and support.



As with Abalimi, KEAG indicated that there is a need for information on the functioning of NGOs in the Western Cape that are involved in agricultural activity. Questions that should be addressed include:

- How do NGOs design and implement their projects?
- How do NGOs source funding and human resources?
- How are NGOs working in the same field structured? Are they focused on one task or are they multi-functional? Do they have separate departments?
- How do NGOs access support (especially funding) for follow-up activities? (see Box 4.1 below).

#### 4.2.6b The Centre for Integrated Rural Development (CIRD)

CIRD is an NGO that is primarily involved in supporting rural development, but also includes activity in urban areas and supports a number of farming groups in and around the Cape Metropolitan Area. CIRD's core mission focuses on poverty reduction and alleviation. It has four primary areas of work, namely land reform, small and medium enterprises development, community health care and training.

One of the key areas of focus for the urban section of CIRD's work is land reform and supporting the local livestock and poultry farmers located in and around the Stellenbosch/Paarl area. CIRD provides support and advice to several farming groups and associations in the region, and is particularly involved with facilitating communication between these groups and the local municipal authorities.

Problems that CIRD have encountered, with respect to urban agriculture, include the attitudes of local municipalities, who seem unwilling to make land available for black farmers, and the lack of financial capital to buy land and make it available for use by black farmers. Associated with the current lack of access to land experienced by many local black farmers, are the conditions under which livestock are kept, often in cramped, unsanitary conditions and in close proximity to busy roads. As a result, road fatalities are relatively frequent.

#### 4.2.6c Program for Land and Agrarian Studies (PLAAS)

PLAAS is a unit of the University of the Western Cape's School of Governance. It was established in 1995 and its foci include research, policy support, post-graduate teaching, training, and providing advice and evaluation services with respect to land and agrarian reform and rural development. PLAAS staff members have contributed to the development of national policy on land reform, agriculture, and sustainable resource development. PLAAS also runs training courses, seminars and research workshops to provide government and NGO staff with the skills required to implement effective land and agrarian reform programs, sustainable rural development strategies, and natural resource management.

#### 4.2.6d The Agricultural Research Council (ARC)

The Agricultural Research Council (ARC) has a Western Cape institute located at Infruitec, Stellenbosch. (This institute also incorporates the previously separate Nietvoorbij). The ARC was established under the terms of the Agricultural Research Act, 1990 (Act No. 6 of 1990) and reports to Parliament through the Minister of Agriculture. It receives about 60% of the public funds allocated for agricultural research and development. The ARC is involved in developing technology for agriculture and supporting small-scale farmers

#### 4.2.6e PELUM Association

PELUM Association (Participatory Ecological Land-use Management) is a Southern African association with 11 member countries, including South Africa. It is a network of NGOs working in the field of ecological land use and production, and it seeks to implement African applications of food production that go beyond permaculture. The stated purpose of PELUM is to: *Facilitate the establishment of regional, subregional and national structures which will enable members to achieve effective training and advocacy in participatory ecological land-use.* Approximately 12-15 South African member organizations belong to PELUM. The two Western Cape members, registered with PELUM, are Abalimi Bezekhaya and KEAG.

##### **Box 4.1 Typical patterns in NGO operation**

In response to the questions posed by KEAG with respect to the operation of urban agriculture NGOs in the Western Cape, the following may be noted:

##### **1. Implementation**

The NGOs profiled in this report usually adopt a mixture of top-down and bottom-up approaches when designing and implementing projects. Most NGOs embrace the philosophy of community participation in starting and maintaining urban agriculture groups, but at the same time target communities are often faced with problems such as lack of organisational capacity and lack of resources. The NGO's involvement in implementing urban agriculture projects may rest anywhere on the spectrum between the extremes of complete NGO control of the project (usually characterised by NGO initiating the project and then eliciting community support) to community-based action that is simply supported by the NGO.

##### **2. Sources of funding and human resources**

All NGOs require funding for their operations. Some obtain these via government grants and funds that are made available for social programmes such as those co-ordinated by health and social services departments. Funding is also obtained from business and the private sector. Overseas funding is also important. It would seem that one of the most significant means of obtaining the latter sources of funding, is through networking and establishing sponsorship relations. With respect to human resources, it would seem that there are two main sources. The first, is the target community. Members of the local community become involved in projects and their skills and training are then utilised by the NGO to continue similar work in other areas. Most NGOs also have personnel that are from outside the community. These NGO workers often have higher levels of education than the target community, are from a different social group and are in positions of relative power within the NGO.

##### **3. NGO functioning**

With respect to how urban agriculture NGOs are structured, the NGOs profiled suggest that most NGOs have urban agriculture as one of a number of foci for the NGOs activity (e.g. Abalimi Bezekhaya which also organises the Cape Flats Tree Project or Quaker Peace Centre which is involved in conflict resolution). There are, nevertheless, NGOs purely dedicated to food security and food gardening (e.g. Food Gardens Foundation). When NGOs are involved in more than just urban agriculture, this activity is usually dealt with as a separate department.

##### **4. Follow-up funding/support**

There is a dearth of information on how NGOs continue to obtain funds once a project is initiated. However, it may be assumed that there are two main sources of support and funds, namely those originally involved and those whose support is elicited subsequent to the project initiation.

## 5 CASE STUDIES OF AGRICULTURE ON THE CAPE FLATS

This section discusses eight case studies of gardening groups in and around Cape Town. The case studies are each located in one of four Cape Flats townships: Langa, Nyanga, Philippi or Khayelitsha. The information included in each case study refers to:

- Project Establishment and Access to Resources
- Membership
- Participation and Responsibilities
- Motivation for Gardening and Attitude
- Cultivation Methods
- Crops
- Soil
- Water
- Problems Experienced
- Use of Produce: Sale, Consumption and Other
- Other Activities and Future Plans

These case study areas were selected following an investigation of urban agriculture throughout the CMA. The studies were selected according to geographical location and links with supporting organisations discussed in section 4. It was found that respondents preferred semi-structured questionnaires and therefore questionnaire A3 was devised following the checklist used by Oudwater, in order to facilitate comparison. However, overall it appeared that urban agriculture garden projects in the Cape Flats were more structured and organised than those identified by Oudwater for Mamelodi Pretoria with a few exceptions. Therefore comparisons between the two surveys should be made with caution particularly in the light of the different social histories of the two regions as well as culture and economic circumstances.<sup>50</sup>

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<sup>50</sup> Ethnicity is a silent dimension in the social analysis and it should be noted that in South Africa the history of government control over the distribution of the population groups has resulted in social patterns that are often distinctive of particular areas. Previous areas of residence are often an indicator of ethnicity and hence may also be associated with particular language groups. This is especially the case with respect to rural areas. This study found that most gardening group members who came from areas in the Eastern Cape were African and Xhosa-speaking. However, less homogeneity occurred between the urban-born Capetonians surveyed in the study. This group included both Xhosa-speaking Africans and Afrikaans-speaking Cape Coloureds (see appendix A6a, A6b and A6c).

## 5.1 Case Study 1: Masizakhe Gardening Group, New Crossroads

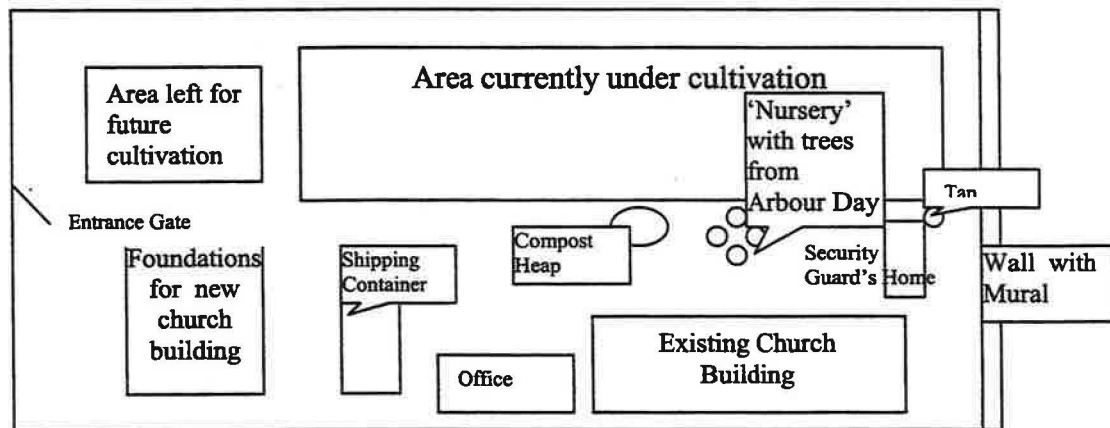


Figure 5.1a: Diagrammatic representation of the Masizakhe Gardening Group's garden, New Crossroads (Spring, 1999).

### 5.1.1 Project Establishment & Access to Resources

The Masizakhe gardening group is part of the Masizakhe environmental project, which is in turn part of a larger community movement started in 1990, a period of civil unrest and rent boycotts in New Crossroads. At the time, many women were participating in protests against rates and housing rental increases. Police action often resulted in the women being arrested and detained, leaving their children without adult supervision. As a result, a local community member, Mrs Angeline Zenani, saw a need to take care of such children, and she established Masizakhe's first project: an after-school care programme and a preschool.<sup>51</sup> Masizakhe, which means 'we must build ourselves' has now (1999/2000) developed into a community action group which also serves other functions, such as co-ordinating community clean-ups, providing training on health issues, specifically AIDs, and undertaking activities such as drama and art lessons. Mrs Zenani says: "*Our vision is to develop the community*".

Having witnessed agricultural practices in the Transkei, where she formerly resided, Mrs Zenani began practising vegetable gardening when she moved to New Crossroads. However, because her son was unemployed, she extended the buildings on her premises to make room for a Spaza shop, for which her son is now responsible. As a result of the development, the space available for her vegetable garden became restricted, so she approached a neighbour, who had more land, and requested the use of a portion of his land for cultivation. The neighbour agreed. It is initiatives such as this which have seen Mrs Zenani extend her own gardening activities, and those of others, via the formation of the Masizakhe Gardening Group.

In 1997 an evaluation of the progress of Masizakhe's activities revealed a need to address the issues of street children and unemployment in the community. Around this time, several community members attended a training course at Abalimi Bezekhaya and a vision was borne of providing a source of income for the unemployed and food to the street children, via a soup

<sup>51</sup> In 1998 Mrs Zenani completed a course in community development at UCT. She had previously worked as a field worker for the Children's Resource Centre in Salt River and felt compelled to help her own community. Mrs Zenani, whose family lives in the former Transkei, came to Cape Town with her brother and has lived in New Crossroads since 1982. She is actively involved in her community. Her activities include membership of a local school's management committee, being secretary of a local street committee, involvement in RDP community clean-up campaigns and other environmental programmes, leading school tours to areas of interest such as Cape Point, and actively networking with groups and individuals who can help her community

kitchen. In the same year, eight youth members from the New Crossroads community attended training courses run by the LDU and they too wanted to be involved, in order to put what they had learned into practice. Through negotiations and discussions within the community, it was decided that a local church should be approached for land on which to cultivate produce. The Apostolic Church, in David Street, was approached, and the presiding priest agreed to make a large portion of its land available,<sup>52</sup> since the church did not have the funds to build on the property at the time. An agreement was signed and a committee, consisting of eight members, was elected at a meeting of the Masizakhe preschool parents committee. At this time, the property on which the vegetables were to be grown was not fenced. However, with the financial assistance of the Australian High Commission the premises was fenced.<sup>53</sup> In addition, two shipping containers were obtained, to be used by Masizakhe as offices and a tool shed. In May 1999, LDU staff facilitated a workshop at which the existing eight member executive structure of the group was restructured to include youth representatives. The executive usually meets on a quarterly basis, and before special events that must be co-ordinated. Mrs Zenani is the group co-ordinator.

Most of the inputs have either been provided by the supporting NGO (the LDU) or Abalimi Bezekhaya. The group usually buys seeds from Abalimi Bezekhaya's Nyanga Garden Centre, which is in close proximity (see Transect walk map 6.1). The group has easy access to the garden because they have their own set of keys for the gate. The group believe that even once the Apostolic Church has enough money to build, they will still have security of tenure, and their vegetable beds will not be under threat since the foundation for the church building has already been laid elsewhere.

#### **5.1.2 Membership**

Few of the members belonging to the Masizakhe Gardening Group have had previous experience with gardening or farming activities prior to their involvement in the project. Some were trained by NGOs (specifically Abalimi Bezekhaya and LDU), and they have helped others to learn what to do in the garden. Membership of the group is free, and open to any community member. The group welcomes outsiders as well, since, as Mrs Zenani points out, this can provide support for other community gardening groups to begin work in their own areas. In 1999/2000, the group had 25 members, with little change in membership since the project's inception. The group consists of four preschool staff and 21 community members, 15 of whom are youths. Among the youth there are six males and nine females involved, with two men and eight women among the adults. Three of the female adults involved in the vegetable growing are the heads of their households. The ages of the youth members range from about 14 to 25 years, while the adults are all young to middle-aged (approximately between 25 and 50). The majority of the members are originally from the area, although there is a direct correlation between this statistic and the fact that most members are youths, born to parents who may not have been born in Cape Town. Most members knew each other before becoming involved in the project, through various social networks such as relatives, attending school and church together, and being neighbours and members of the same groups such as street committees.

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<sup>52</sup> There was a lack of awareness on the part of the group regarding measurement of size of gardens. This impacted on the ability to access land as some groups were unable to communicate to planners

<sup>53</sup> The arrangement for obtaining the fence was made via a contact that Mrs Zenani made while visiting Cape Point Nature Reserve with a group of school children.



### **5.1.3 Participation and Responsibilities**

Most of the work is done on Saturdays, when the youth can attend the garden. During the week many of them do not have time because school ends late in the afternoon and some live too far away to come and garden before going home. Gardening activities are organised on a rotational basis, especially as far as youth participation is concerned. The older members participate in the garden on a voluntary basis. The allocation of tasks is usually done by Mrs Zenani, who drafts a plan of action before each Saturday and organises the people to do certain activities. At present, there is no allocation of plots to individuals, and everyone is responsible for the entire garden, although there are plans to provide each individual with his/her own (small) plot in the near future.

There are often visitors to the garden, including community members, friends and relatives as well as outsiders, who come to visit the garden. For example, in November 1999 a group of prison warders visited the garden accompanied by staff from the LDU. The garden was used to demonstrate to the warders the problems that could face returning prison inmates who have learnt agricultural practices during their time in prison. This provided the visitors with a vivid illustration of the problems particular to the Cape Flats area, such as sandy soils and poor access to resources, for which returnees are often unprepared when wishing to cultivate produce as a livelihood strategy after returning from prison.<sup>54</sup>

### **5.1.4 Motivation for Gardening and Attitude**

The motivations cited by various group members for their involvement include:

- Interest;
- Previous experience because of employment as a gardener at the city council;
- The vision to see the community developed and provide food for the street children and work for the unemployed, as one member said: *"You can have something to give to your children and can help your neighbour"*.
- The need to train urban populations how to fend for themselves, and set an example to them using the group's own garden.
- As far as the motivation for including youth in the project is concerned, Mrs Zenani's comment is pertinent: *"If the youth are busy, they won't be involved in crime"*. Meanwhile the youth members interviewed expressed a variety of reasons for the involvement in the garden including a general interest in gardens.

The members feel that the benefits of working together in a group include keeping motivation high, learning from each other, and maintaining momentum in getting things done. Nevertheless, there are times when members are not motivated to work in the garden, especially the younger members who would rather go and play (this sentiment was expressed, however, by older members). Nevertheless when speaking to the younger members it was apparent that the mural produced by them on the containing wall was a source of pride as well as a resource which they used to explain their gardening activities (see plate 5.1).

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<sup>54</sup> It is interesting to note how a subsistence garden was used, by the supporting NGO, as an educational tool to enhance the understanding of outsiders who are similarly involved in teaching agricultural activities elsewhere. The transect walk and household survey also showed the influence of this garden project with 20% of respondents saying they were now considering vegetable garden in their yards providing that the garden project could supply support for the initial preparation of the land that was often stony and unlevel and needed heavy labour to level the plots.

Mrs Zenani believes that most people are interested in the groups' activities, although *'lazy people say it's nothing' and some community members have said that the group is 'wasting their time'*. One of the youth members commented that sometimes people in the townships trample over gardens that are producing food. He also said he would like to educate others so that they can provide for themselves and learn not to trample other people's plots.<sup>55</sup>

**Box 5.1 Involvement of the Youth in the Masizakhe Garden Project**

Among the youth members of the Masizakhe Gardening Project are a number of artistically talented youths who are also part of a self-initiated artists group known as Guga S'thebe Visual Artists. The artists have been involved in a number of projects to date, from road-side mural painting for road safety campaigns to the redecoration of restaurant and office interiors. One of their projects was to paint a mural on one of the walls surrounding the Masizakhe garden. The mural depicts gardening activities, and has contributed to local interest in the activities taking place on the premises. The group has received training in a variety of art forms, including mural painting, mosaic design, print making, textiles, paper technology, ceramics, interior design, sculpture, soldering, three-dimensional construction and pottery. Recently, (Summer, 2000) the group was given permission to use one of the available cargo containers on the premises of the Masizakhe garden to temporarily house their activities. They have also begun teaching children from the adjacent primary school some of the artistic techniques that they have learnt. They also hope to involve others in their projects, especially destitute street children and unemployed adults. This vision is complementary to that of the soup kitchen being planned by the Masizakhe gardeners, and it illustrates that the developmental nature of urban agriculture may be more than simply supply of vegetables for food security, but may include and even result in extensive social networking and support bases for disadvantaged communities.

**5.1.5 Cultivation Methods**

Early in 1999, the Masizakhe gardening group began to plan its activities. A training workshop was held, facilitated and run by the LDU, and in July the first crops were planted, with the assistance of the LDU. Raised beds were established, in which a variety of vegetables were planted, including carrots, beetroot, spinach, cauliflower, lettuce and cabbages. The LDU provided the seeds/seedlings, manure, and equipment including gardening tools, a hose-pipe and a sprinkler.

Although the group has undergone some training, it is evident that more is needed. For example, overcrowding in the beds resulted from some seeds being sown too close together and when the cauliflower heads began to grow the group did not know what to do to protect them from the sun. Nevertheless, the group is eager to learn from their mistakes and ask the LDU for advice. The group also uses organic methods of pest control, as taught by the LDU. For example, snails are eradicated using a mixture of washing up liquid, pepper and garlic, which the group has found to work very well.

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<sup>55</sup> Indeed four of the youth asked if they could be included in this research project as assistants.



Plate 5.1 Masikakhe showing area under cultivation and mural of vegetable production (January, 2000).

#### 5.1.6 Crops

In Spring 1999 the garden contained beans, beetroot, cabbage, cauliflower, carrots, lettuce, leeks, onions, potatoes, pumpkin, spinach and tomatoes. A number of trees were planted along the periphery of the property, most courtesy of Arbour day<sup>56</sup> activity. A few apple trees are interspersed with decorative flower plants at the end of the rows of vegetables.

Reasons for preferences for certain crops expressed by members of the gardening group include spinach, because it grows fast; tomatoes, because they can be eaten straightaway; and carrots, because they are perceived to be good for eyesight. Spinach, lettuce and cauliflower are perceived as those crops with the best yields, while cabbage is felt to be very difficult to grow, because it takes a long time and attracts pests. The plot size is 50m x 26m see figure 5.1b.

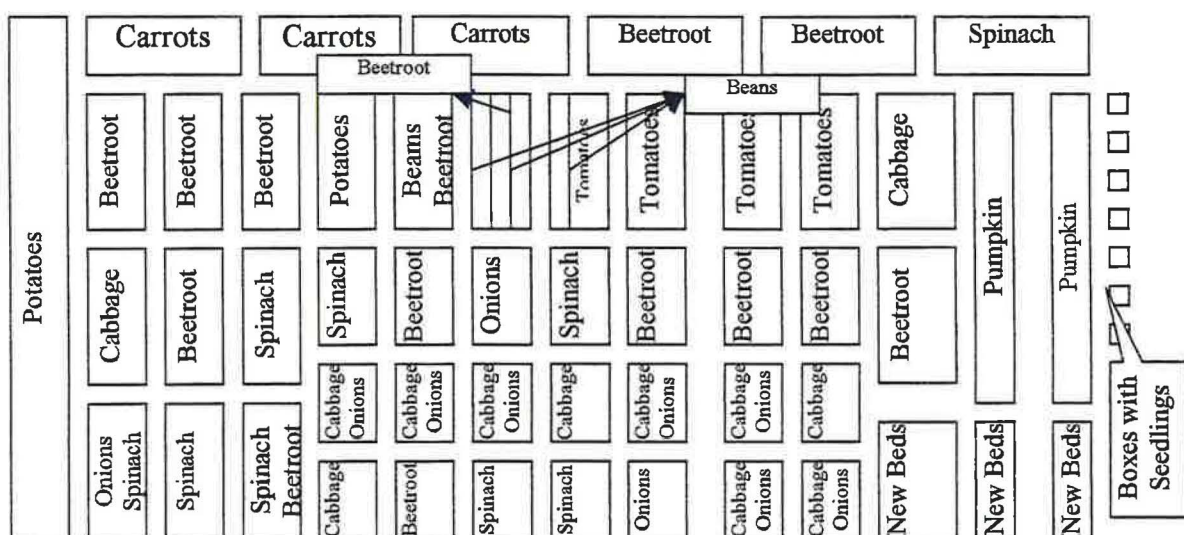


Figure 5.1b Diagrammatic representation of the crops in the Masizakhe Gardening Group's garden (Spring 1999)

<sup>56</sup> Arbour day is a nationally celebrated tree planting day in South Africa, and is part of an on-going drive to promote greening, especially in township areas that receive special attention during arbour week.



### **5.1.7 Soil**

The soil in the garden is sandy, but this is not perceived to be a problem because the LDU supplies topsoil and manure in which the vegetables are grown. Soil maintenance and improvement of soil fertility is undertaken using a number of techniques, such as mulching (using tree litter and grass), making compost from organic household waste and garden refuse, and top dressing the soil with topsoil provided by the LDU. The group has also begun to collect grass cuttings from the neighbourhood and places such as the local schools, which they keep in large plastic bags to decompose before using on the gardens.

Since the group has only just begun its garden, they have not yet implemented crop rotation, but plan to do so with future crops. However, the group does not believe that intercropping is a good idea, because they feel that the differential water requirements of different vegetables will create problems for those requiring more water. Whilst there was no specific training on water uptake this response is based on previous experience.

### **5.1.8 Water**

Water is obtained from a municipal supply on the premises. However, the group has not been paying for its water because the council was not responsive to requests to come and install a tap on the premises. In the interim, a neighbour's supply was used. At the time of survey (Spring 1999) there was a water supply point on the premises because a community member installed the necessary piping and tap. The group intends to pay for water in future. Initially, the group watered the garden by hand, for about four hours a day. This was felt to be too long to dedicate to watering. At the time of survey they also used a mobile sprinkler attached to the hose pipe. The group feels that a proper sprinkler system is needed throughout the garden. The group does not currently reuse greywater, partly because it is too far to carry household water to the garden beds and partly because they are wary of using water that has chemicals in it.

### **5.1.9 Problems Experienced**

Although the garden is fenced, and the group has not yet had problems of theft, there is a fear that once the garden begins to produce more abundantly the produce will not be secure enough. Another problem is that the youth are sometimes not available to work in the garden, because of other extra mural activities or because they are not motivated. The group have also had some problems with snails and birds, and have noticed yellow spots on their cabbages, but generally do not perceive there to be pests or diseases attacking the garden. Mrs Zenani also feels that it is a problem that there are no food parcels or other forms of payment available for those who labour in the garden. She would like to find sponsorship of some kind, that would enable them to provide additional incentives or support to group members. Although this group thrives under strong leadership from Mrs Zenani, strong leadership might create a problem as seen elsewhere<sup>57</sup> (see below).

### **5.1.10 Use of Produce: Sale, Consumption and Other**

The gardening group has sold some of their produce, such as lettuces and spinach (at R1/bag). According to some members, the best crops for selling are spinach, potatoes, cabbage and onions, because these form part of the daily diet of many household in the area and are easy to cook. The proceeds of vegetable sales have been used to buy more inputs for the garden. As

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<sup>57</sup> The LDU's perspective on requests for financial assistance/incentives in the daily running of the garden is that to provide such assistance would be 'spoon-feeding' and would undermine the sustainability of gardening projects (M.Malaoa, pers.comm., 2000). However, the LDU is prepared to assist groups with organising/funding special events which promote the garden.

of Summer 2000, no individual has received money from the sales. Sales occur on a relatively *ad hoc* and informal basis, when the gardeners are approached by members of the community whilst working in the garden. The group occasionally harvests produce for its own consumption, although this is not excessively done.

In future, the group intends to sell seedlings to the community, thereby providing an essential resource that will enable others to begin their own home vegetable gardens while providing the group with a source of income. Produce is also intended to supply the proposed soup kitchen, as soon as it becomes a reality.

#### **5.1.11 Other Activities and Future Plans**

The Masizakhe gardening group participates in local community clean-ups and environmental events such as arbour day. Trees supplied by the local authority for arbour day have been planted along the boundary of the garden, to form wind breaks. On 16 November 1999, Masizakhe held an open day at the garden, to celebrate the activities of the group, thank those who had supported the project and stimulate community awareness about the work of the group. At the function, lunch was served, with vegetables harvested from the group's garden.

This gardening group would like to extend their activities and cultivate more land in other areas and open spaces in their neighbourhood. They also plan to introduce some techniques, such as crop rotation and the use of crop residue for improving the soil. The group is also planning to get sponsorship that will help them to provide food parcels to those who are involved in the gardening, to supplement their income and dietary intake.

## **5.2 Case Study 2: The Acacia Community Development project, Parkwood**

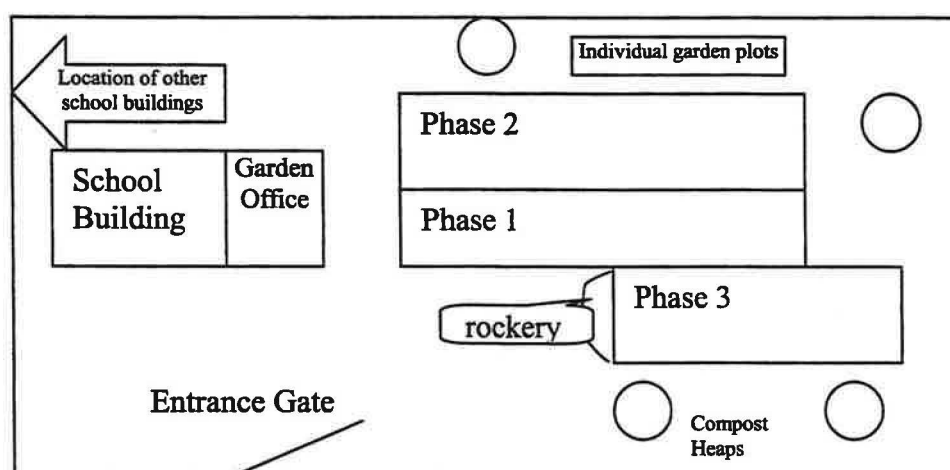


Figure 5.2a: Diagrammatic representation of the garden at Acacia Primary School, Parkwood (Spring, 1999).

### **5.2.1 Project Establishment & Access to Resources**

This project is a joint initiative between the Food Gardens Foundation and the Acacia Primary School, and is supported by various other parties. The school is part of the Peninsula School Feeding programme with the project originally intended to supplement the school's feeding scheme. In 1997 the Principal of Acacia Primary, Mr Gabriel, attended a demonstration of the Food Gardens Foundation (FGF) at Seekoeivlei Primary School, and subsequently approached the FGF to request assistance in developing food gardens on the premises of the school. Initial activities included a small garden with plots for which the school children were



responsible. However, these did not prove to be very successful,<sup>58</sup> and in early 1999 a decision was taken to develop much larger gardens on a more commercial basis, using the school property. This action was in line with changes in the school feeding scheme detailed in Box 5.2.

#### **Box 5.2 The Peninsula School Feeding Scheme Association**

Until 1958 there was a government-based feeding scheme. However, in 1958 the government stopped the subsidy provided to schools for food because of a perception that the scheme was wasteful. At the time there was a public outcry which resulted in the formation of the Peninsula School Feeding Scheme Association. The Association lobbied government, but it was only in 1992 that government began to address poverty and hunger in schools. Under the auspices of the Minister of Health, the National Nutrition and Social Development Programme (NSDP) was implemented and money was allocated to the Association. In 1994 the provision of food at primary schools became a Presidential Lead project and was part of the RDP. This injected further funding into the provision of food for poor children at schools. As a result of the increased government funds the Association expanded to cover many other areas in the Western Cape. There are also other organisations currently supporting school feeding in the Western Cape, including the N2 rural development foundation, and the George Child and Family Welfare Unit. The Peninsula School Feeding Scheme has developed a good relationship with the Department of Health, and was therefore strongly supported. Unfortunately, this situation was not replicated elsewhere in South Africa, where those NGOs and organisations already involved in school feeding programmes were often overlooked and/or ignored by government. Thus, compared with the other provinces, school feeding programmes in the Western Cape are well established.

In 1999 the Association provided food to 772 schools throughout the Western Cape, feeding approximately 213,000 children. The Association relied on schools requesting assistance, rather than seeking schools that require assistance. The Association has been funded by public donations, for which it has occasionally had to lobby, through media and requests to the public, although recently the Association has also received funds via government channels. However, the funding is temporary and is provided on the understanding that it will not always be available. Thus, there is an imperative to help communities cope with feeding problems and to make projects for school feeding self-sustainable. In an attempt to do so, the Association has been looking at the establishment of food gardens, on school premises, that can help to subsidise the soup pots, provide an income for the school, and generate jobs for the local community. The food garden that has been developed at Acacia Primary School, with the help of the Food Gardens Foundation and the support of the Peninsula School Feeding Scheme is a pilot project aimed at such sustainability. Although the initial costs of such a project are high, and a lot of time is required for supporting it, the project is providing a useful model that could, with the appropriate minor adjustments, be applied in other areas and at other schools. In addition, the Acacia gardening project has spin-off activities associated with it. These include a recycling project (which is being assisted by Fairest Cape Association), plans for a soup kitchen and a nursery on the schools premises, and the improvement in the education of the gardeners, one of whom is now attending adult literacy courses as a result of involvement in the project.

At present, the allocation of funding for school feeding programmes is done either directly with the school or via institutions such as Peninsula School Feeding Scheme. This funding includes 10% for administration costs. Thus, many schools opt for independence from organisations administering school feeding on behalf of the Department. The logic appears to be that the school can make some money from doing feeding on its own. However, this is not necessarily the case since, as the Association points out, schools cannot buy in bulk, as the Association can. The funds available to the provincial department of Health for school feeding were cut in 1999, in line with a directive from National Government that provincial spending must be reduced. At the same time, the Department of Education has cut funding to schools, and from 2000 schools have to cover many of the costs previously covered by the Department. In order to identify which schools should continue to receive financial support from Government, the Department of Education developed an assessment system whereby schools were categorised into an number of classes, from A (most needy) to K (least needy). The Department of Health has adopted a policy whereby it will only support children in schools falling into categories A to C. Thus, the Association is left with the problem of how to feed those children falling into categories D to K. There has been significant criticism of this evaluation process (Jamal, 1999 pers. comm., 1999; du Plessis, pers. Comm., 1999).

<sup>58</sup> It seems that reasons for the lack of success of these gardens include lack of skills and lack of motivation among the school children, who together with the teachers were responsible for these plots.

As well as the changes to the School Feeding Scheme, the project was also initiated in a response to the increasing demand for food parcels at Parkwood Clinic. At this clinic, a limited number of food parcels, provided by the Department of Health, were available for the most poverty-stricken in the community. However, the provision of parcels created a dependency problem, and resulted in an increase in the demand for “hand-outs” to the community. In part, therefore, the establishment of the garden also functioned to redress the situation, by redirecting the food parcels to those who were unemployed but who were willing to work in the garden.

The project started with a donation from the Round Table, which provided 12 spades, six forks, a wheelbarrow and a second hand trailer, as well as R250 (£25) worth of seeds. The project is a three-phase development. The first phase began in January 1999 and the third was underway in Spring 1999/2000. The project received inputs from various sources. These include shadecloth and poles (which form wind barriers around each of the three main gardens); horse manure; used tyres (in which potatoes and baby marrows are grown); fruit trees, shrubs and seedlings; seaweed extract; a backpack sprayer and the use of a bulldozer for a day (to clear the land for phase three). In addition, the project also received R140 000 (£ 14 000) from the Department of Health, for nutrition-based community development.<sup>59</sup>

### **5.2.2 Membership**

The project began with 20-30 community members. However, when the food parcel programme was stopped earlier in 1999 the number of gardeners had to be reduced. There are now (Jan 2000) only seven gardeners employed at the garden. They work from 8am to 1pm, on weekdays, and occasionally also on weekends. Each gardener receives a food parcel<sup>60</sup> to the value of R80 and R20 cash every month.

Three of the seven gardeners currently working at the Acacia Primary School garden are women, two of whom are female heads of households. The other woman is married, but her husband is unemployed. The ages of the gardeners range from 39 to 52 years. All of the gardeners are long-term residents of the Cape Peninsula area. Most heard of the project through word of mouth and previously had little experience in gardening. However, one woman, who was involved in the project since the beginning, does have previous experience, having worked at a commercial nursery, Ferndale nursery, where she started out by carrying purchases for customers rather than attending school. She later learnt some gardening skills at the nursery. This gardener was involved in preparing food for the children at Acacia Primary before becoming involved in the gardening project. One of the men at the garden also has previous experience of gardening, from having worked with a commercial gardening service, known as Master Gardens.

### **5.2.3 Participation and Responsibilities**

The committee responsible for overseeing the management of the garden and supporting the gardeners consists of representatives from different interest groups, including the school, FGF, the local community, community health and social workers, the Department of Health,

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<sup>59</sup> This was awarded by the Department of Health via the Peninsula Schoolfeeding Scheme, who submitted a proposal for doing a community development vegetable garden at the school.

<sup>60</sup> The food parcels are made by a local shopkeeper in the community. Thus, the secondary effects of the garden include increased income for other members of the community who are not directly involved. Another consequence of the gardening activity has been that the school caretaker has started to put greater effort into beautifying the school premises, and contributing to the gardens by building a gate for Phase 3 garden as well as creating rockeries of flowers and herbs using rubble that the local council has not removed from the school.

and the Peninsula School Feeding Scheme. The committee is supposed to meet once fortnightly, although it more often happens that meetings only occur once a month. The garden is visited everyday, either by Ms Featherstone (from FGF) or Mr du Plessis (the fieldwork manager for the Peninsula School Feeding Scheme). On Mondays, the work schedule for the week is determined, by Ms. Featherstone or Mr du Plessis, and each of the gardeners is given a job card for work to be completed during the coming week. Primary responsibility for each of the three phases has been allocated to three of the gardeners, who each oversee their particular plots. However, although the beds have theoretically been allocated to different individuals, there are no hard and fast rules. The size of the phases, and hence the amount of work required, as well as the extra hands, means that all seven gardeners are involved in work on each phase, at some time or another.

#### **5.2.4 Motivation for Gardening and Attitude**

Ms Featherstone believes that getting schools to provide food for themselves is very difficult, because there is no motivation in the children or staff, and because the curriculum is not effectively tied in with the food gardens. She says that it is difficult to get involvement and commitment from the community members currently involved. Her experiences have led her to consider not working with schools but rather with the local community, who she feels can be more motivated. Ms Featherstone is concerned that if NGO support is withdrawn, there is little likelihood that the project would continue. She has yet to identify someone in the community who will take on more responsibility for the project to realise its full potential. According to Ms Featherstone, there is also some negativity from other members of the garden's steering committee because there is not more community involvement.

#### **5.2.5 Cultivation Methods**

FGF uses the trench bed method in its projects and advocates the use of organic farming methods. At Acacia Primary, the beds have been well manured, with plenty of hay laid down on the beds as mulch. Spades and forks are usually used for digging trenches, although a bulldozer was once used in order to clear the area of phase three and prepare the land for planting. The latter method is, however, not recommended, as much of the topsoil was lost and had to be painstakingly sorted and retrieved from the pile of soil that was left by the use of the machinery.

Crops are planted and harvested on a continual basis. The most appropriate crop varieties are selected for planting during the summer and winter months. Children from the school participate in the harvesting activities, although only on an *ad hoc* basis and without teacher supervision. It would appear that for the children, harvesting of the plots is simply a recreational activity, and not really an educational experience, except perhaps indirectly.

#### **5.2.6 Crops**

The crops grown are those that are used by the local community. Some of the crops which were originally grown, such as leaf mustard, red spinach and exotic varieties of lettuce, were unfamiliar to the gardeners but nevertheless planted following suggestions by FGF staff. However, re-evaluation has reduced the use of foreign crops, because these are not readily cultivated or bought by members of the community. Limited amounts of these crops are grown for markets elsewhere in Cape Town, primarily the organic market at the Constantia Waldorf School, where FGF's Cape Town branch is based.

Vegetables grown include baby marrows, bush beans, beetroot, broccoli, cabbages, cauliflower, carrots, celery, eggplant, green beans, kale, lettuces, leeks, onions, potatoes,

peppers, pumpkin, spinach, spring onions, tomatoes, and turnips. Chilies and parsley are also grown, and plans in Spring/Summer 1999/2000 were to grow mielies as well. The garden also has flowers, herbs, and fruit trees such as mulberry and guava trees; although the latter are still very young. Flowers grown include foxgloves, blue salvia, gadercias and irises. Originally, there was some skepticism about the planting of flowers, which FGF was promoting at the garden. However, commercially, the flowers are more valuable than the vegetables. The flowers are popular with the local residents, many of whom place them on the graves at the local graveyard.<sup>61</sup> As a result of the commercial success of the flowers, there are plans to increase the area of the garden that is planted with flowers.

Aside from flowers, some of the gardeners also believe that lettuce is an important commercial crop because, they say, it grows well. It is also good for home consumption, as are other preferred crops such as cabbage, beetroot, onions and spinach. Reasons cited for the preference associated with particular crops were primarily given by the women in the group, who said that they are easy to cook. As with other case studies, spinach, in particular, was cited as a useful vegetable because it is well liked and can be mashed with potatoes and onions to make a "delicious dish".<sup>62</sup> Spinach is also perceived to produce good yields, as are cauliflower, lettuce, celery and parsley.

#### **5.2.7 Soil**

The soil at the school is poor, requiring extensive introduction of compost, which has to be bought because current production at the site, although extensive, is not sufficient. Occasionally, the South Peninsula Municipality delivers 40 cubic meters of garden refuse to the school, which is used to make compost for the garden. Compost is obtained from a supplier in the Philippi area, at a cost of R850 (£85) per truck load (equivalent to approximately 10 cubic meters).

Virtually every soil improvement technique available is undertaken at the garden. These include using the school's organic wastes and crop residues, for composting and mulching. Hay is also used for mulching. Cattle and chicken manure are used, and FGF has put recipes for making green manure up on the wall of the project office. Crop rotation is undertaken, and the garden has stakes in each bed indicating a progressive history of what has been planted in the garden to date. Intercropping is done, in particular using tomatoes and lettuce. Organic fertilisers are also used, and the donation of seaweed extract from Kelpac is used to stimulate root growth.

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<sup>61</sup> This is a common finding. For example in Meadows (1998) a survey of Casablanca a township to the East of the Cape Flats, it was found that the only commercial gain from gardens was from selling flowers. In addition, clients at garden centres in Nyanga and Khayelitsha have indicated their desire to obtain flowers from the centre (Julius Mcono, pers comm. 1999; EAU (1994)).

<sup>62</sup> The same was said by gardeners at the Quaker Peace Centre garden in Nyanga. See Case Study 5.5 below.



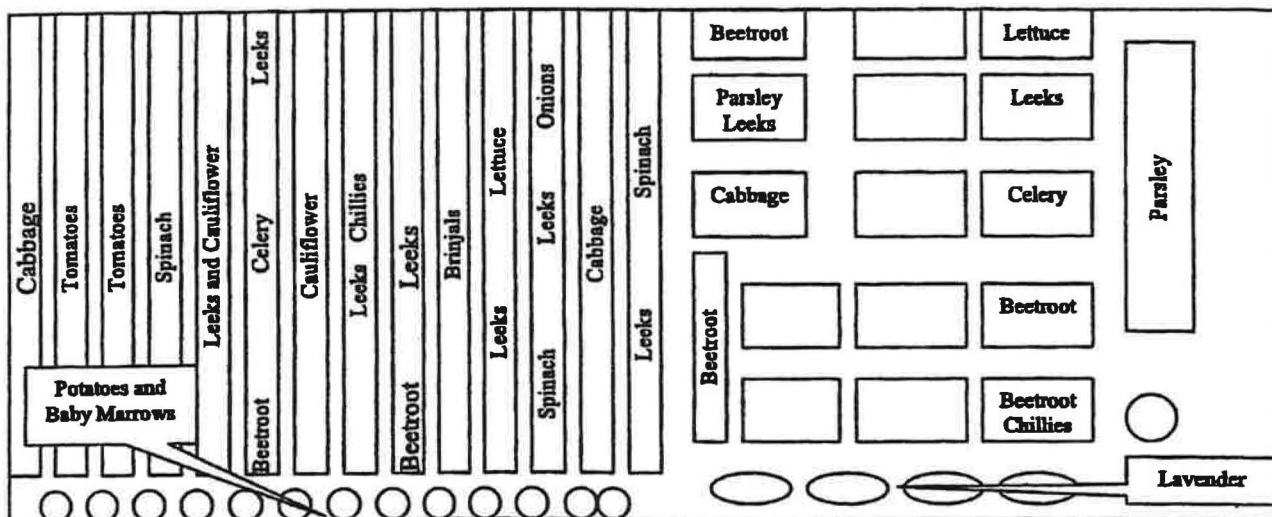


Figure 5.2b: Diagrammatic representation of Phase 1 of the vegetable garden at Acacia Primary School, Parkwood (Spring, 1999).

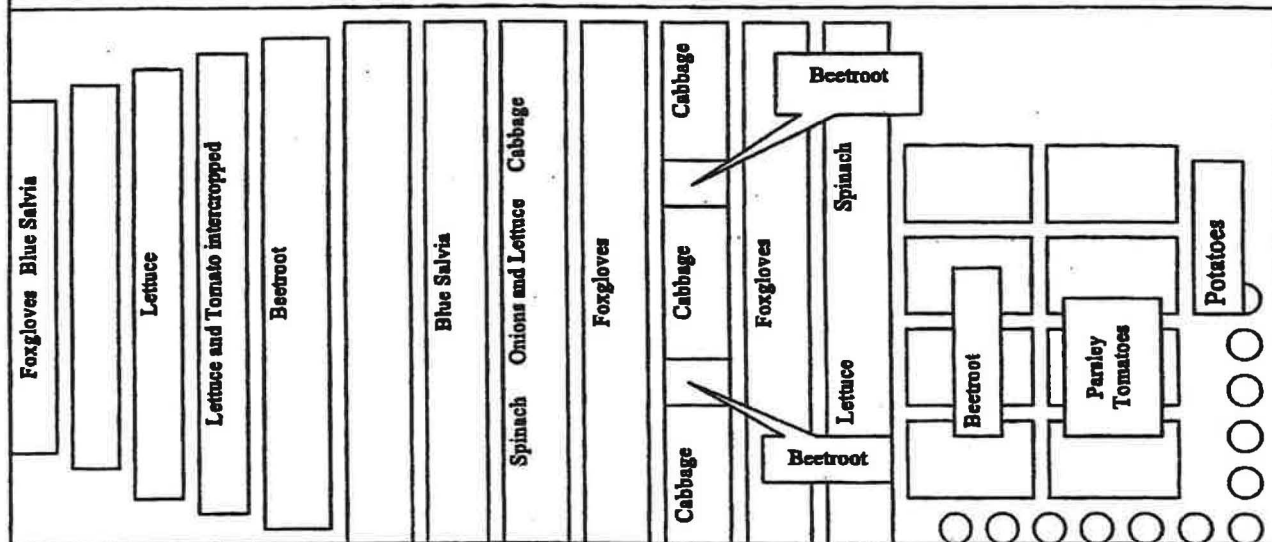


Figure 5.2b(cont.): Diagrammatic representation of Phase 2 of the vegetable garden at Acacia Primary School, Parkwood (Spring 1999).

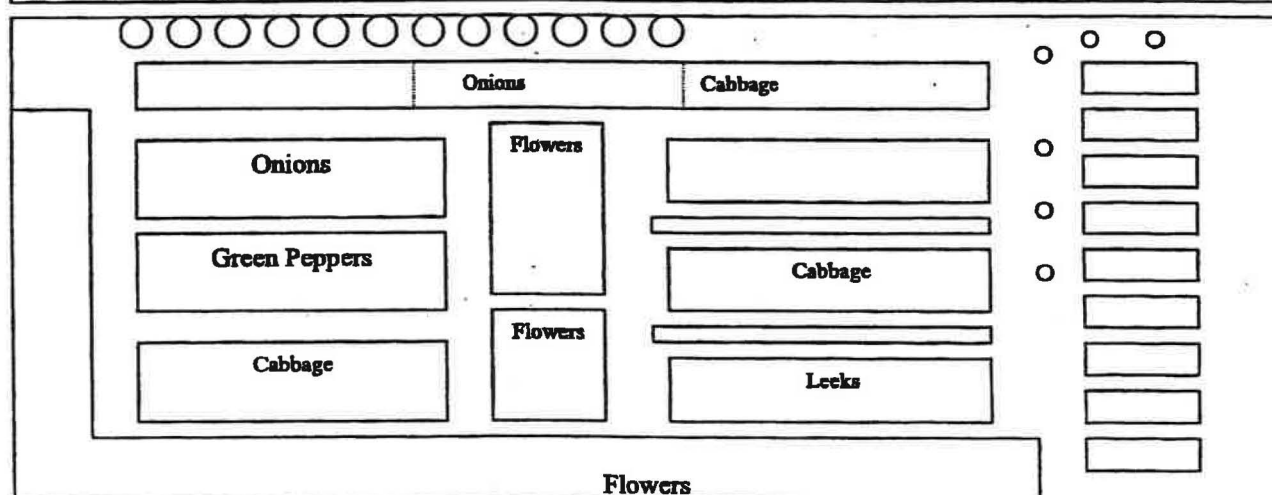


Figure 5.2b (cont.): Diagrammatic representation of Phase 3 of the vegetable garden at Acacia Primary School, Parkwood (Spring, 1999).



### **5.2.8 Water**

The gardens are watered by hand using buckets, small plastic plant pots with holes in the base, or a garden hose attached to a tap on the school's premises. In 1999, the water was effectively free, since the government (i.e. the Department of Education) paid the water bill. However, from year 2000 this will not be the case and the school will have to pay the bill, using its annual grant of around R51000 (£5100). Drip irrigation systems were originally intended for the garden but have not been installed yet, due to financial constraints. Mr Gabriel was concerned about the future of the garden, considering that he also has to use the available R51000 to meet the school's maintenance and educational materials bills as well. He believed harvesting of rainwater, from the school's roofs, and drip irrigation pipes, the best option. A borehole could also be sunk on the premises, since the water table is very high in the area. However, this is expensive. Ms Featherstone indicated that FGF is attempting to instill in the gardeners a sense of responsibility for water-wise gardening practices by monitoring the use of water in the garden and commenting if it is excessive.

Acacia Primary is close to a wetland, and the proximity of ground water to the surface has created problems with drainage in the vegetable garden, which has been partially flooded during the rainy winter season. A drainage ditch has been dug in phase three, to alleviate the problem. There are also plans to redirect some of the natural runoff that flows into the wetland, and in so doing prevent flooding of the garden. The local municipal council has come to the school to investigate the possibility of installing the necessary piping, which was originally planned to go straight through the garden. However, having seen the garden layout relative to the rest of the school's grounds, and identified alternatives, the engineer may redirect the drain. Nevertheless, the installation of such a drain could have a negative impact on the wetland, which a local group of community members are intent on protecting. The situation illustrates the potential for a conflict of interests that can arise as a result of agricultural activities in the urban setting.

### **5.2.9 Problems Experienced**

Although the lack of familiarity with certain crop species created a problem in the beginning of the project, adjustments have since been made. The usual agriculture related problems, including pests such as the caterpillars of the cabbage white butterflies<sup>63</sup> and snails, are also encountered, but these do not appear overly problematic and are quickly dealt with using organic pesticides and treatments. As mentioned above, waterlogging of the garden has been a problem, but steps have been taken to deal with this issue. In terms of project success, the primary problem appears to be lack of motivation and initiative, which has in turn had negative impacts on, for example, ensuring that produce is harvested on time to get to market.

### **5.2.10 Use of Produce: Sale, Consumption and Other**

Usually, the produce is sold at the local clinic. The gardeners have a trolley that they use to take the goods to the clinic, although FGF sometimes helps out by providing vehicular transport. The goods are sold on Thursdays, beginning at 9 am. Prices are set by FGF, and are displayed on a poster that hangs on a door inside the clinic. In the past, the proceeds of such sales were put back into the school's feeding programme. However, the project recently

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<sup>63</sup> The large white or cabbage white, known as *Pieris brassicae* is indigenous to England and is a common pest in Mediterranean countries. It was first detected in the Western Cape of South Africa in 1994 and has become a major pest in the region, which has a similar climate. It is particularly fond of feeding on plants of the Brassica family and lays its eggs on the back of the leaves of plants such as wild mustard, nasturtiums and cabbages. It is in its caterpillar stage that this species does the most damage to vegetable crops (Seedling News, July 1997).

(Spring 1999) acquired some funding of its own, and will be opening a bank account in its own name, with the school's treasurer undertaking the financial management of the garden's income. The income generated by sales will then be used to buy further inputs for the garden, which are currently being subsidized by FGF. Each of the gardeners is also allowed to take some of the produce for private consumption.

#### **5.2.11 Other Activities and Future Plans**

In an attempt to induce greater community involvement and ownership of the project, an advertisement has been placed for someone to undertake transport of the project's resources. For example, transport is required for the collection of horse manure in Hout Bay and old tyres for planting potatoes. The relationship between the gardeners does not appear to extend beyond the garden. They do not really undertake other activities together, although some individuals are involved in other activities, such as adult literacy classes, as a result of the project.<sup>64</sup> In addition to their work in the gardens, each gardener has been allocated a small plot of land that they are to develop as their own. As an incentive to the gardeners, a competition was planned for early 2000, at which each person's plot would be judged according to criteria derived from good food gardening principles. The prize for this competition was R250 (£25). Ongoing training is being provided for the participants on a weekly basis.<sup>65</sup>

In the long term, the school would like to develop its premises into an open space area that can be used by the community for recreation while also conserving the wetland in the area. It is also intended that the garden will eventually hold its own market days, and that a nursery will be established, which will sell seedlings and plants, including herbs, as well as compost, to the local people. A need has therefore been identified for a noticeboard on which the available produce can be advertised.

### **5.3 Case Study 3: Sinethemba<sup>66</sup> Garden and Catering Project, Langa**

#### **5.3.1 Project Establishment & Access to Resources**

This gardening project, which began three years ago, started with a group of 10 women who were trained at Tsoga environmental centre to do vegetable gardening. The women were trained in gardening techniques, with a view to becoming trainers themselves. They formed a group in order to get access to more land because they felt that their home gardens were not enough. After consultation with Tsoga's director, Ms. Nomtha Dilima, the group decided to approach a local church, affiliated to the Ethiopian Episcopal Church, to investigate the possibility of utilising some of the church's land. The women discussed their ideas with the elders of the church, who agreed to make land available on the basis that the women would contribute towards the payment of the church's water bill, which was large because payments were in arrears. In return the women could use the land for agricultural production. An offer was made to pay about R100 (£100) per month for water, and an agreement was signed. Over the past three years, R1500 (£150) was paid to the church each year, as a contribution to the water bill. The money for these and other expenses of the Sinethemba Gardening Group came from a Kelloggs Foundation grant that was administered by Tsoga. However, since the

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<sup>64</sup> For example, the female gardener who missed school whilst working at Ferndale Nursery is illiterate, but she is enrolled in an adult literacy course which was recommended to her by the fieldwork co-ordinator from Peninsula School Feeding Scheme.

<sup>65</sup> In early 2000, the competition was postponed due to lack of interest. However, Ms Featherstone reported that an additional four schools have become involved in similar urban agriculture activities to those at Acacia Primary since the Spring 1999 field visit, and these schools will also take part in the planned competition.

<sup>66</sup> Sinethemba means 'we have hope'.

inception of Sinethemba, problems have arisen with the water payments. Apparently, the church has been wasteful with its water, leaving taps and toilets running and not fixing leaks. This has added an extra burden to the already heavy water bill and the group is now refusing to pay for the water. Owing to these problems the gardening activities at the church have been discontinued, although approximately half of the women still grow vegetables at home. The group hopes, however, to re-initiate their work early in the year 2000, using land adjacent to the church, which is owned by the local authority. The data recorded below therefore applies, to the group's previous gardening activities at the church and the group's continued backyard gardening in the interim.

None of the women involved in Sinethemba have had previous experience in market gardening. Following their training with Tsoga, they were provided with seeds and seedlings, as well as manure and some artificial fertiliser (2:3:2) that was obtained from Starke Ayres, a commercial nursery in the nearby middle-class suburb of Rosebank. Since the project's inception, the group has obtained most of its manure from Tsoga. The women also produce their own compost, using fine grass cuttings, leaves and household organic waste. Other sources of fertiliser include a local cattle owner who provides the group with cattle manure and hay, and poultry farmers who allow the women to come and collect chicken manure when the chicken coups are cleaned.

Seeds are either bought from Starke Ayres (using the proceeds of sales) or obtained from letting a portion of existing crops go to seed. The women arrange transport to Starke Ayres with the director of Tsoga, Ms. Nomtha Dilima. The group has been told, by an employee of TSOGA, which packets of seeds are the best to buy. They say that Mayfair, which packages the seeds in foil, is the best. In Spring 1999, the group's seeds were kept at the Chairperson's house, for safekeeping, with the various pieces of gardening equipment, including spades, forks, rakes, a hoe, and wheelbarrows that were provided by sponsors. These are to be stored until the group begins its gardening activities again. In the meantime, members go to the Chairperson if they want seeds to plant in their home gardens.

Members of Sinethemba have signed an agreement with St Stephens Church, Mandy road, Langa, regarding their use of the church's land for vegetable production.<sup>67</sup> The group has a key to the gate of the church property. However, as described above, they are not making use of this land, owing to conflicts over payments of the water bill. The group has applied to the Cape Town City Council for the parcel of land adjacent to the church, and was granted use thereof in March 1999. However, there are competing interests, and a local forum of small businesses has also applied to the council for the land. Nevertheless, Ms. Dilima, who is assisting and advising the Sinethemba group, believes that the different activities are not incompatible, and has suggested that the site be developed for multi-purpose usage.

### **5.3.2 Membership**

All of the members of Sinethemba are women, with most being young to middle-aged and either single or the head of their households, with only two living with husbands. The group began with ten women, some of whom have subsequently left. However, more women have also joined the group, bringing the total number of members in the group back to 10. The reasons for the changes in membership include strife within the group, which is attributed to the moodiness and rudeness of one individual, who has since left, and a breakdown in

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<sup>67</sup> The group were unsure of the size of the land, but Ms Dilima estimates it to have been approximately 60m squared.

communication between parties. Six of the existing members were already acquaintances, via their church, before being trained together at Tsoga.

Membership is restricted to those who have already had training via Tsoga. Since the members themselves are in a position to provide the necessary training, they usually suggest to prospective members who require training that they organise a group of between 10 and 20 people who would like to be trained. The aim is to train others who can then begin their own groups. The women of Sinethemba have tried to restrict their membership to about ten people, because the land available for cultivation is limited. Thus, they try to encourage others interested in vegetable growing to start their own groups elsewhere. The group has occasionally allowed another person to join them in their own garden when that person is planning to move from Langa in the short-term or when they want to be trained but are only able to come for hands-on training and cannot afford to pay anything for the more formal training.<sup>68</sup> The group is considering membership fees, which could be about R5-R10 (50p-£1) a year.

Approximately half of the members in the group are Capetonians by birth, while the other half are from the former Ciskei or Transkei. Neither the locals nor immigrants had an adequate understanding of farming vegetables before they attended the training with Tsoga. Some of them did try to plant some vegetables and flowers, but as Mrs Bebeza, the chairperson of the group, remarked, "*they were not perfect*". The group's primary source of knowledge and technical advice is Tsoga, although the women are not afraid to experiment and adjust their activities accordingly. They have previously rejected instructions from others that they found to be unsuitable for their farming conditions (see discussion below).

### **5.3.3 Participation and Responsibilities**

When the group was still cultivating the land at the Church, each women was responsible for a particular portion of land during the planting periods, but at other times of the year members worked together in maintaining the garden. "*We do everything together*", said one member, "*because we want the place nice*". The responsibility of watering the garden was normally determined on a rotational basis, although those living closest to the garden usually did more watering than the others. The women had an unwritten agreement that no-one must take advantage of the help offered by others, and be lazy by not coming to the garden to weed and water. Work in the garden usually started at 9am, although during the summer months they began earlier, at around 7am, to avoid the heat and to make sure that the garden was properly watered. Morning work sessions usually lasted about two hours, and the women returned in the late afternoon again, for another short gardening session. Outsiders sometimes assisted the group in the garden.

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<sup>68</sup> Training usually costs about R100-R150 (£10-15) per person in a group, and is conducted on a yearly basis. Providing training can be an additional source of income for the women, but it often happens that those most interested cannot afford the fee. Some trainees are sponsored by TSOGA.



#### **5.3.4 Motivation for Gardening and Attitude**

The motivations cited for undertaking gardening activities, both at home and at the communal garden, include income, pleasure and beauty (especially associated with flowers), and the ideal of helping the needy (see discussion on sale of produce).

Although economic hardship is a motivating factor working in this garden, Mrs Bebeza perceives the economic benefits of the group's gardening activities as lacking potential: *"The main problem is money, because even by selling, we don't get a lot of money. Now we're not getting anything...It's not easy to get people to do things without money!"* (Cynthia Bebeza, pers. comm. 1999)

The women in the group had a good relationship with one another, and worked well together. Indeed, their activities provided them with an additional support network, whereby the group 'feels like family'. Examples of support offered by group members in times of need included visiting those who are sick, and bringing them some food, or helping those who have recently lost a family member with preparing food for after the funeral.

With respect to community attitudes relating to the group's activities, it would seem that the general community is relatively supportive of the group's work, and would like to do similar work themselves, since it is from this group of people that new, prospective gardeners are trained. Nevertheless, it is also interesting to note that Mrs Bebeza's children, one of whom is trained as a social worker, have told her that they would prefer her not to grow her vegetables in the front garden, because the front is meant for flowers.<sup>69</sup>

#### **5.3.5 Cultivation Methods**

The Sinethemba group has been taught the raised bed method of planting. Soil preparation consists of removing stones and plastic waste from the area, loosening the soil, adding manure to it, and creating a slightly raised bed in which seeds and seedlings are then planted. Cultivation is seasonal, with two crops being harvested each year.

Intercropping is not practiced by the group, because of a belief that this complicates crop rotation. The latter method of soil improvement is taught by Tsoga during training. When the garden was still being cultivated, water was obtained from a tap on the church premises, and watering was done by means of a hosepipe and sprinkler provided by Tsoga.

The group is encouraged by Tsoga to avoid poisonous pest control substances. The women are aware of preventative techniques such as covering crops with shade cloth, to prevent the cabbage butterfly from attacking the vegetables, but do not currently have such resources for their garden.

#### **5.3.6 Crops**

Some crops were grown in both winter and summer, including beans, beetroot, cabbage, carrots, celery, parsley, spinach and tomatoes. Lettuce, onions, and turnips were only grown in summer, as were pumpkin, butternut and squash, which the gardeners learnt can only be grown as a summer crop because winter rains provide too much moisture and hence these crops go mouldy in winter. The group also grew some flowers. The plot size is 6m X 10m.

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<sup>69</sup> In the following Section 6, transect walks and household surveys, it was frequently the case that the younger generation wanted home gardens for flowers in conflict with the older generation (usually women) who wanted to grow vegetables.



### **5.3.7-5.3.8 Soil & Water**

For the purposes of this report, these sections are not comprehensive because the women were not able to cultivate collectively managed land during the research period and there is therefore little data on these aspects of the groups activities.

The group watered the garden twice a day in summer. No waste-water was used at the garden, since the transfer of household water from the home to the garden is difficult because of distances. However, even at home, the gardeners do not recycle water on their crops, because they are afraid that the soap is harmful to their crops and could kill them. The notion of watering crops with grey water is a foreign concept which they have never been taught.

### **5.3.9 Problems Experienced**

The primary difficulty that the group faced was limited access to land because of the issue of the payments for water at the church premises. Aside from this, and the problems that resulted in changes of the group's membership, few other problems were noted. Previously, when the group's cultivation activities were still continuing, the cabbage white butterfly's caterpillar attacked the group's cabbages and cauliflowers, and spinach sometimes goes yellow, but there did not seem to be a major pest or disease problem.

Although they have not had serious theft problems in the past, the group was aware of the possibility of this occurring. Thus, they have taken steps to avoid this, by not planting crops that they believe will encourage pilfering, particularly maize. They also removed all of their gardening equipment and the stock of seeds from the church, whilst they are not gardening there.

### **5.3.10 Use of Produce: Sale, Consumption and Other**

Produce from the Sinethemba garden has been both sold to the local community and consumed by the members' households. The group also sometimes sold the flowers that it grew to the church, for funerals. The most important crop, in terms of sales, was believed to be spinach, followed by carrots, beetroot, cabbage and tomatoes. Squash, butternut and pumpkin was usually only grown for home consumption. According to Mrs Bebeza, spinach provided the best yield, followed by onions and cabbage.<sup>70</sup> The group usually priced its produce according to market prices, at about 50 cents less than the other township stores. They tried to be cheaper so that everyone could have something to eat, and they also usually sold produce at a reduced rate to the poorer segment of the local population. In future, they aspire to having a soup kitchen where produce could be used to feed those in need.

### **5.3.11 Other Activities and Future Plans**

The gardening activities of the Sinethemba group were linked to a catering enterprise that provided food and catering services to the general community and especially to Tsoga, for a small fee.<sup>71</sup> Produce from the garden was used whenever possible, but the women also bought additional food products for their catering business, which depended largely on business derived from Tsoga-related activities and functions. Aside from these activities, and the envisaged soup kitchen, some of the women in the Sinethemba group were interested in other economic activities, such as sewing, that are more economically productive. As Mrs Bebeza remarked, *"We want to have more income. We can't live on veg alone."*

<sup>70</sup> It is interesting to note the difference in opinion between this view, that cabbage is good in yield, with that of Mrs Zenani from Masizakhe, who feels that it takes too long to grow (see Case Study 1).

<sup>71</sup>TSOGA usually pay around R35/person for such catering.

## 5.4 Case Study 4: Siyazama Community Allotment Garden, Macassar – Khayelitsha

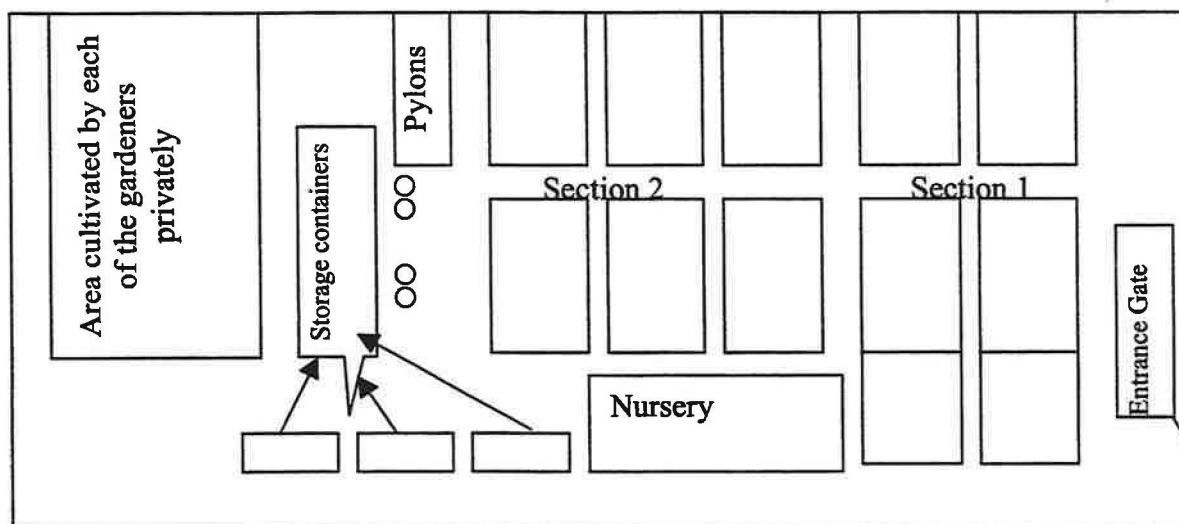


Figure 5.4a: SCAGA Khayelitsha

### 5.4.1 Project Establishment & Access to Resources

The Siyazama Community Allotment Garden (SCAGA) is an urban agriculture project located on approximately 5000m<sup>2</sup> of power-line servitude land in Town 3, Village 4, Section 39, Macassar-Khayelitsha (Erf no. 39236). In 1994, the Siyazama Neighbourhood Garden Group (NGG)<sup>72</sup> were taken by Abalimi to visit the Quaker Peace Centre's community garden in Khayelitsha, Section A.<sup>73</sup> After this horizontal transfer site visit, the Siyazama NGG were inspired and applied to Abalimi for support to set up their own community garden. Abalimi had previously provided several training courses to the gardeners, and continued to support them with follow-up sessions. Workshops were conducted on topics such as biological pest control and permaculture. Abalimi is involved in on-going training and support of the gardeners.

The garden itself was started in 1997. During 1996 the Lingulethu West Transitional Council agreed to the use of the land by the SCAGA group, although there is not a formal lease agreement between the parties involved the decision taken at the meeting at which the land was formally granted has been minuted. The director of Abalimi believes that the group's tenure on the land is secure because *'the local authority would not dream of taking the land away from the group now'* (Rob Small, pers. comm.1999). He says that there are a number of reasons for this, including (a) that there would be a strong reaction from the community, (b) that the land cannot be utilised otherwise anyway, (c) that it is being watched and used as a case study and as such has been referred to in urban open-space planning studies, and (d) it has been used as an important example for anti-poverty/environmental community action and VIP site-visit stop for the Tygerberg Local Agenda 21 launch in 1999.

Initially, SCAGA was a very strong group with a strong leader but differences over financial issues disrupted the group dynamics (Van Boom, pers comm. 2000). SCAGA has been

<sup>72</sup> Abalimi had been supporting this neighbourhood garden group, of around 30 members, since 1992/1993.

<sup>73</sup> This QPC garden was the first community garden to be established in the Cape Flats townships, and was partly established with Abalimi planning and resource support.

plagued by problems ranging from conflict within the group to lack of motivation among the gardeners. In 1999, these organizational problems eventually led Abalimi to take a decision to let the garden collapse altogether. However, because of the interest that potential funders and government departments have shown in Abalimi's work in this area, this decision was reversed. Instead, Abalimi opted to take over the management of a portion of the garden itself, so that sufficient evidence of the potential for community gardens could be offered to visitors that would suggest the suitability of such gardens as a model for policy and funding, even though the community had yet not been able to achieve independence from the supporting NGO.<sup>74</sup> A lot of Abalimi's resources have gone into establishing, maintaining and supporting SCAGA. At present, therefore, Abalimi wishes to use the garden as a demonstration model for community gardening and the problems faced by NGOs and local community groups in establishing such gardens. Indeed, the SCAGA garden has served this purpose during separate visits by the South African and German Ministers of Environment. In future, it is hoped that SCAGA will provide a suitable model for the establishment of community market gardening in the Cape Flats townships, particularly because of its unique location on ground that would otherwise remain underutilised.

Abalimi Bezekhaya is the group's main source of training and expertise as well as inputs for the garden ranging from seeds and seedlings to manure and bonemeal. Abalimi has also facilitated the group's access to resources beyond those strictly associated with urban agriculture. For instance, Abalimi assisted the group with their application to the Royal Netherland Embassy for money to buy sewing machines. Abalimi uses SCAGA as a key visiting point for VIPs, donors, researchers etc.

#### 5.4.2 Membership

At its inception, SCAGA had 30 members, two of whom were men. At first, the two men exercised considerable power in the group, and assumed executive leadership positions together with one of the more educated women, Mrs Ngada. However, group conflict and social tensions resulted in changes to the membership composition that saw both men leave after the second season. Mrs Ngada then became chairperson of the group. The reasons for the conflict are complex, but stem from misappropriation of funds and rudeness on the part one of the male members and a friend of his, who was not a member of the group. It has been suggested that the main reason for the conflict was a difference in expectations, with the men viewing the garden as a source of income and a job opportunity while the women regarded the garden as mechanism for ensuring food security. Tensions escalated, and eventually the two men were 'expelled from the garden' (Fermont *et al.*, 1998:23).<sup>75</sup>

The group's constitution states that "*the group welcomes everybody who is interested in gardening*" and according to the constitution membership fees are R10,00 (£1) per annum. In 1997 the women raised a concern about having to pay for their plots, saying that "*nothing was told to them about renting plot*" (minutes of meeting held 13/11/97) although it was an item of

<sup>74</sup> Abalimi was only supposed to be supporting SCAGA over a three year period. The initial contract, which ended in March 2000, was then to be assessed and will, in all likelihood, be renewed. The impulse to prove that community gardening projects such as this should be supported appears to be partly fuelled by the belief that there is an unwarranted lack of faith in such micro-projects at government level. This belief is based on a tangible absence of committed support from Government and the results of research published on the matter.

<sup>75</sup> Fermont *et al.* (1998) contains the results of research conducted at SCAGA by a group of researchers from the school of environmental studies at the University of the Western Cape. The research was focused on management options for improving the feasibility of vegetable gardening in deprived communities of the Cape Flats, with an emphasis on Agroforestry.

the constitution that each member would pay R12 (£1.20p) per person per season. The women are also supposed to pay R2 (20p) per week for electricity.

In 1999 there were 16 members, although not all of these were active in the garden and there seemed to be a power struggle within the group between those with a better education who prefer to be involved in other activities (such as sewing) and those less educated but enjoy working the soil. It would appear that the power base was with the more educated, serving terms of office in the SCAGA executive committee. In addition, because of its position as a resource provider, Abalimi Bezekhaya also has a certain degree of power in the group dynamics at SCAGA. These group dynamics are further discussed in the section on participation and responsibilities (see below). The average age of the SCAGA members to be 35, and most of the gardeners (65%) were married (Fermont, 1998:23). Some of these gardeners came from Transkei and had previous experience in gardening.

#### **5.4.3 Participation and Responsibilities**

As a result of the numerous problems that have been experienced at the SCAGA garden, the situation with respect to allocation of plots and the status of different plots (whether they are communal or individual) has changed over time and is complex.

The minutes of a meeting held on 13/11/97 indicate that the preparation of the beds was a communal activity and that 30 plots had been prepared, which divided among 16 women meant that there were 14 women with two plots each, and two women with only one plot each.

In August 1999, Abalimi Bezekhaya had taken a decision to let the garden collapse. However, because of the garden's status as an ideal demonstration plot to present to visiting donor representatives, this decision was reversed and Abalimi managed a portion of the garden itself, with communal participation in gardening activities from eight of the members.<sup>76</sup> The remainder of the garden is available for division among the SCAGA members, into individual plots. Initially, each member had six beds. However, it seems that they are not really able to cope with this work load (Abalimi Fieldworker, pers. comm. 1999). Some of the individual plots exhibit a significant amount of effort on the part of certain gardeners, while others are simply neglected. Efforts to maintain the "Abalimi section" received an additional boost with the news that another donor would be coming to visit the garden in early December 1999. The effect of Abalimi's direct involvement in the garden appears to have shifted the sense of responsibility somewhat, as one Abalimi staff worker commented: "*They [i.e. the gardeners] don't see that they are responsible for that garden.*"

#### **5.4.4 Motivation for Gardening and Attitude**

A recent study conducted at SCAGA found that the primary motivations for having a home garden included feeding the family without having to buy vegetables, not having any money, not having any work (or having nothing else to do), being used to gardening, and liking to grow vegetables or having a green area in front of the house. These were also found to be the motivations for joining gardening groups, although social motivations, such as working together, getting to know neighbours, or learning new skills, were also mentioned.

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<sup>76</sup> It would appear that there is even a significant degree of apathy among this group, since only a few of the eight members originally identified to help in the section are actively doing so.

It would appear that different motivations exist between the members of SCAGA, with some members actively participating in the garden and seeing gardening as the fulfillment of their aspirations, while others (especially those who are less active in the garden) see membership of SCAGA as a means to accessing other resources. Certainly, membership of SCAGA has previously brought numerous developmental inputs that are not necessarily associated with gardening. For example, Abalimi has helped the group to obtain donations and funding in order to acquire sewing machines. Abalimi also directs significant donor attention to the garden. As a result the garden has become something of a showpiece. It is therefore understandable that existing members, even those who are not truly interested in farming, would be hesitant to relinquish their access to the developmental inputs that have come to be associated with the SCAGA garden. As one Abalimi fieldworker remarked, *"They don't want to give up the land to those who are interested in farming because they fear they will lose something"*.

Whilst it could be argued that SCAGA is a drain on Abalimi time and resources Abalimi is willing to sustain its involvement because of the pivotal knowledge gained from its experience with SCAGA and because of its model status due to its site on servitude land. SCAGA is used as a demonstration garden by Abalimi and a horizontal transfer model for ABALIMI course trainees and community garden groups. SCAGA is used by Abalimi as a research site cum fundraising tool, which presents the possibilities for and value of urban agriculture to visiting outsiders, with arguably less impact on the locals or the gardeners themselves.

#### **5.4.5 Cultivation Methods**

Abalimi teaches the trench bed method of cultivation in its training programmes, and this method is used at the SCAGA garden. The garden is divided into three sections of 12 plots, with six beds in each plot. 98% of the beds have now (2000) been converted to trench beds. The trenching process was strongly influenced by comparative results which overcame the reluctance to perform the additional onerous labour. Christina Kaba of Abalimi assisted SCAGA to arrange a number of 'Ilima', the traditional method of attracting additional labour. Beer and food is served to all who contribute a days work. This method attracted underfed and unemployed and cost little.

In the section of the garden currently under Abalimi's management, a number of windbreaks have been constructed, using branches cut from Rooikrans<sup>77</sup> bushes just outside the garden. Trees and shrubs have also been planted as living windbreaks along the perimeter of the garden's fence and between plots in the garden.

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<sup>77</sup> Rooikrans is an alien invasive species in the Cape Flats area. There are some programmes to eradicate this species in the Cape Metropolitan Area.





Plate 5.2 SCAGA Trench bed cultivation on sandy soil (Jan 2000)

#### 5.4.6 Crops

At present, the crops grown at SCAGA include beetroot, cabbage, cauliflower, carrots, eggplant, green peppers, green beans, lettuce, maize, onions, potatoes, peas, spinach, tomatoes and turnips. Abalimi supplies the inputs for these crops, including seeds, manure and fertilisers. Abalimi staff also suggest to the gardeners what should be planted, although fieldworkers have noticed that the gardeners do not usually like to plant what they do not eat themselves. The plot size is 5000m squared (see fig 5.4 below).

#### 5.4.7 Soil

The soil at SCAGA is approximately 96% sand and studies have found that the ability of the soil in the garden to retain nutrients and water is very low (Fermont *et al.* 1998:72). This study also suggests that the soil was further impoverished when the existing, relatively fertile topsoil that used to be in the area was removed, during preparations for the township's development (*Ibid*).<sup>78</sup> Fertilisers that have been used at SCAGA include bonemeal, liquid chicken manure, organic material, cattle manure and liquid guano manure.

#### 5.4.8 Water

Water for the garden is obtained from 5 wellpoints which are driven by an electric pump. There is also a metered municipal water connection. Both were installed with funds raised by Abalimi. Watering of the plots is done using a hose pipe, either by hand or with a sprinkler attached to the hose. Research on drip irrigation technology has also been conducted in the garden. However, the results of this research may have been skewed owing to the gardener's lack of understanding about the purposes of the research.<sup>79</sup>

<sup>78</sup> Experiments have been conducted at the SCAGA garden to test different soil preparation methods. During the first growing season (April/May 1997), a number of trench beds lined with newspaper, carton and other organic matter, were dug and the beds were then fertilised in the same manner as a number of other untrenched beds in the garden. Apparently, the gardeners 'noticed that the vegetables grown in trenched beds performed better than vegetables in non-trenched beds and [they] decided to convert all their beds into trench beds' (Fermont, *et al.* 1998: 73).

<sup>79</sup> At an impromptu meeting of Abalimi staff and women from the SCAGA group it came to light that the women had actually watered the experimental plots fitted with the systems under analysis. The reasons for their

Beans			
Carrots			
Red Lettuce	Broccoli	Green Lettuce	Onion
Peas		Onion	

Potatoes		
Beans		
Peas		
Red Butter Lettuce Cabbage		
Carrot Spinach Turnip		
Cabbage Onion Green Lettuce		

Potatoes		
Beans		
Peas		
Carrot Onion		
Cabbage Green Lettuce		
Red Lettuce Broccoli Spinach		

Potatoes			
Turnip/ Broccoli			
Broccoli/Red Lettuce/Spinach			
Carrot /Cauliflower			
Green Butter Lettuce			
Green Butter Lettuce			
Cabbage/Red Lettuce			
Spinach/ Onion			

Peas	
Potatoes	
Iceberg/Red /Green Lettuce	
Onion Spinach Cabbage	
Cabbage Turnip Carrot	
Lettuce Spinach	

Potatoes	
Beans	
Onion	
Red Butter Lettuce Iceberg	
Spinach	
Cabbage	

Figure 5.4b: Diagrammatic representation of the SCAGA garden, Khayelitsha (Spring 1999).  
Part 1

Potatoes			
Carrot	Onion		Turnip
Peas Beans			
Iceberg Lettuce	Spinach	Green Lettuce	Broccoli
Green Lettuce	Spinach	Cauliflower	Red Lettuce

Potatoes			
Turnip	Onion	Spinach	Carrot
Peas Beans			
Green Lettuce	Cauliflower	Red Lettuce	Spinach Broccoli
Spinach	Red Lettuce	Broccoli	Green Lettuce

Potatoes			
Spinach	Green Lettuce	Broccoli	
Carrot		Turnip	
Peas			
Spinach	Green Lettuce	Cabbage	Red Lettuce
Peas			

Beans			
Potatoes			
Carrot	Green Lettuce	Turnip	Carrot
Peas			
Cabbage		Red Lettuce	Broccoli
Spinach	Red Lettuce	Cauliflower	Iceberg Lettuce

Potatoes			
Carrot	Green Lettuce	Turnip	
Peas			
Spinach	Onion		Broccoli
Green Lettuce	Spinach		Carrot
Cabbage	Onion	Red Lettuce	Broccoli

Potatoes			
Onion	Red Butter Lettuce		Onion
Beans		Turnip	
Peas			
Spinach	Green Lettuce	Onion	Broccoli
Cabbage	Red Lettuce	Onion	Green Lettuce

#### ***5.4.9 Problems Experienced***

As has already been mentioned, intergroup conflict has been problematic. Some of these problems could also have been influenced by changes to the staff of the supporting NGO, which saw a heavily involved individual leaving the NGO (and hence also his work with the SCAGA group). This resulted in a shift in the type of leadership and involvement offered by Abalimi staff (Van Boom, pers. comm. 2000).

#### ***5.4.10 Use of Produce: Sale, Consumption and Other***

Some of the produce from the garden was sold, although this was usually on the initiative of Abalimi staff or volunteers, rather than the women belonging to SCAGA. Some produce was also consumed in the home.

As part of the ongoing research process into converting Abalimi supported community gardens into market gardens, an input/output record and organic vegetable marketing research report has been compiled. The market research was conducted over 11 market days in November 1999. The total crop value at SCAGA for the period was R6580.00 (£658), of which R600 (£60) was actually sold. Production expenses were R449.3 (68%) of the crop value. It is believed by Abalimi that the production expenses will decrease to 50% of crop value when the soil reaches 'sustainable fertility level' and gardening skills increase.

#### ***5.4.11 Other Activities and Future Plans***

As indicated above, some members of the SCAGA group have become involved in other activities, particularly sewing. However, it appears that the lack of leadership has stifled ideas/enthusiasm for future projects. SCAGA members have expressed the desire for many other initiatives such as: Their own training programme, a creche, a road-side stall which sells their crops, sewing produce and other goods, a sewing room on site so members can sew together and tend their crops, a small livestock section, a nursery which operates as a business and a feeding scheme. Abalimi has already begun to support some of these initiatives but their first objective is to create sustainable informal jobs by vegetable marketing and sales.

At a recent meeting with the NGO – People's Dialogue on Land and Shelter, it was suggested that the SCAGA members who do not want to farm could rent their plots to committed farmers and use the rental income to develop a micro-loan fund for other activities. The SCAGA group have initiated a group savings scheme which could be the vehicle for this approach.



## 5.5 Case Study 5: Quaker Peace Centre, United Reformed Church Property, Nyanga

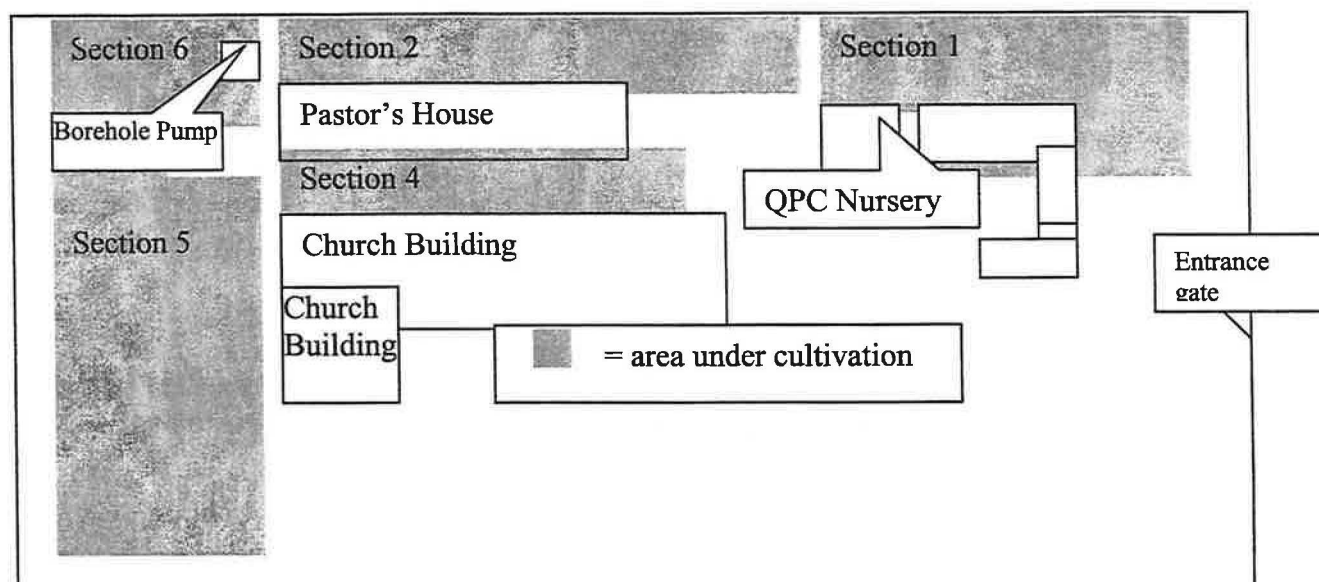


Figure 5.5a: Diagrammatic representation of the Quaker Peace Centre gardens, Nyanga (Spring, 1999). Total plot size 30m X 40m.

### 5.5.1 Project Establishment & Access to Resources

In 1997, the Quaker Peace Centre approached the United Reformed Church, Nyanga to request the use of a portion of land on the church premises for vegetable growing. At the time, Quaker Peace Centre had already established a communal garden in Khayelitsha, and was also actively encouraging<sup>80</sup> home gardening among unemployed women in KTC, Nyanga. The Khayelitsha centre served as an inspiration to local community members in Nyanga and surrounds, so staff at the Quaker Peace Centre felt that there was a need to make land available for those with very little or no space for vegetable gardening at home. An agreement was reached, and over time the garden has grown to include much of the available land on the property, including most of the area surrounding the minister's mission.

There is a small nursery on the property where gardeners can obtain seeds and seedlings, as well as manure, organic fertilisers and pesticides. The nursery charges very little, or sometimes nothing when gardeners have no money.

### 5.5.2 Membership

Currently, there are 113 vegetable growers working the land under the supervision of Quaker Peace. Most of these are women, with only five men participating. Most of the gardeners originally come from elsewhere in South Africa, mainly the Transkei, Ciskei and East London. The gardeners currently reside in the neighbouring townships of Nyanga, KTC and New Crossroads. Some have gardens at home, but most depend on the garden at the church for access to land for cultivation purposes, as use of land at home for vegetable growing is restricted by other domestic land use demands (see Section 6, below)

<sup>80</sup> By training courses and vegetable growing sensitization events at the community garden.

### 5.5.3 Participation and Responsibilities

This project, unlike most of the other case study groups profiled in this report, makes plots available to community members on an individual basis. There is no “gardening group” as such. Individuals who wish to obtain land can approach the Quaker Peace Centre’s fieldstaff and request a portion of land. The Centre is responsible for allocating the land, usually in the form of a plot that is about 6m x 3m, and for providing the necessary inputs for vegetable gardening (seeds, compost, access to water).

Gardeners may use the produce of their plots as they see fit, but those who neglect their plots for some time may find them allocated to someone else. In addition, the Centre’s fieldstaff play a supervisory and/or regulatory role. For example, where gardeners’ decisions are deemed to be unfeasible, impractical or unjust by the fieldstaff, action may be taken. This was illustrated during the time of this survey, by the case of a gardener who planted pumpkins on a small plot with limited space to expand. The pumpkins overran the gardener’s cabbages, and threatened to grow into another gardener’s plot. On seeing this situation, the fieldworker removed the offending plants, without the gardener’s knowledge or consent. This experience was also seen to be repeated in a follow up site visit, when a watermelon plant was removed.<sup>81</sup>

### 5.5.4 Motivation for Gardening and Attitude

Whilst income from sales of vegetables for those who sell vegetable produce regularly is low (approximately R14 per month), selling vegetables was frequently cited by members as a reason for gardening. Savings from not having to buy vegetables was also a motivating factor.<sup>82</sup> However, this might have been because whilst other gardens had multipurpose reasons for their existence (e.g. accessing other resources at SCAGA, or environmental education at the schools) QPC’s rationale was to make land available to grow vegetables. Moreover, observations made on site visits seemed to indicate good social cohesion between those tending their plots. There were other incidents that also indicated pride and satisfaction as being motivations for gardening at QPC. During the household survey for instance, one QPC member brought her QPC training certificate from her bedroom wall to show us (see section 6) She also explained, at great length, the cultivation methods taught at QPC and said she enjoyed passing her knowledge on to others. At several other households in the area others said “*What is the point of going to the New Crossroads Garden, QPC is best*”. An almost ‘jealous pride’ in QPC seemed to be revealed by the system researchers had to go through to get clearance for permission to take photographs. It was later revealed that the group’s caution was because:

*“We want to make sure that Abalimi does not see our vegetable growing secrets.”* (QPC group member, Jan 2000)

### 5.5.5 Cultivation Methods

The gardeners are taught cultivation practices by the Quaker Peace Centre staff. The raised bed method is used. Planting is done three times a year, in March, June and September. The frequency with which gardeners’ tend their plots is variable, but usually, if plots have been sufficiently watered, gardeners came to the QPC plots every two to three days.

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<sup>81</sup> At the time of the case study site visit it could not be established whether this type of uncompromising management caused resentment amongst those who had had their crops removed. However, informal discussions with the gardening group members who were tending their plots during site visits revealed that gardeners resented members who did not tend their crops. As one pointed out: “*the land and the soil is too good [valuable] to be wasted on lazy people who do not care*” (QPC Garden Group Member, Jan 2000).

<sup>82</sup> The household survey showed that on average R19-R32 (£1.90p-£3.20p) was spent on vegetables per week.



#### **5.5.6 Crops**

The crops grown include potatoes, beans, spinach, cabbage, lettuce, mielies, beetroot, pumpkin, marrows, squashes, tomatoes, green peppers, onions, carrots, eggplant, celery, chillis, turnips, peas, cauliflower and broccoli. Of these, beans and mielies are regarded essentially as summer crops, while peas are regarded only as a winter crop. Some herbs, such as thyme, are grown between the beds, by the supervising fieldworker Ms Vicky Yokwana, who has also started a rockery at the entrance to the gardens. Some flowers, such as agapanthus, are grown in a bed adjoining the minister's residence, but flowers are not grown by the gardeners themselves.

Preferred crops include spinach because it grows fast, is the 'umbrella' of all vegetables, and is said to be good for the kidneys and high blood pressure. The latter comment is also believed to apply to lettuce. Cabbage is another favoured crop, followed by carrots which are believed to be good for the eyes and which are also valued because they may be eaten raw or cooked, and are a suitable vegetable for salads. (see Fig 5.5 below).

#### **5.5.7 Water**

Water is obtained from a borehole, which was sunk and paid for by Quaker Peace Centre at a cost of R17 500 (£1750). There is also a municipal water connection, which supplies water to the minister's house, which is sometimes used by the gardeners. Each gardener is supposed to pay R5 (50p) a month to cover the cost of the water used, which is a reduced rate because the minister does not charge the group at council rates. Some gardeners, who are unable to pay these bills, run up accounts with the Quaker Peace Centre.

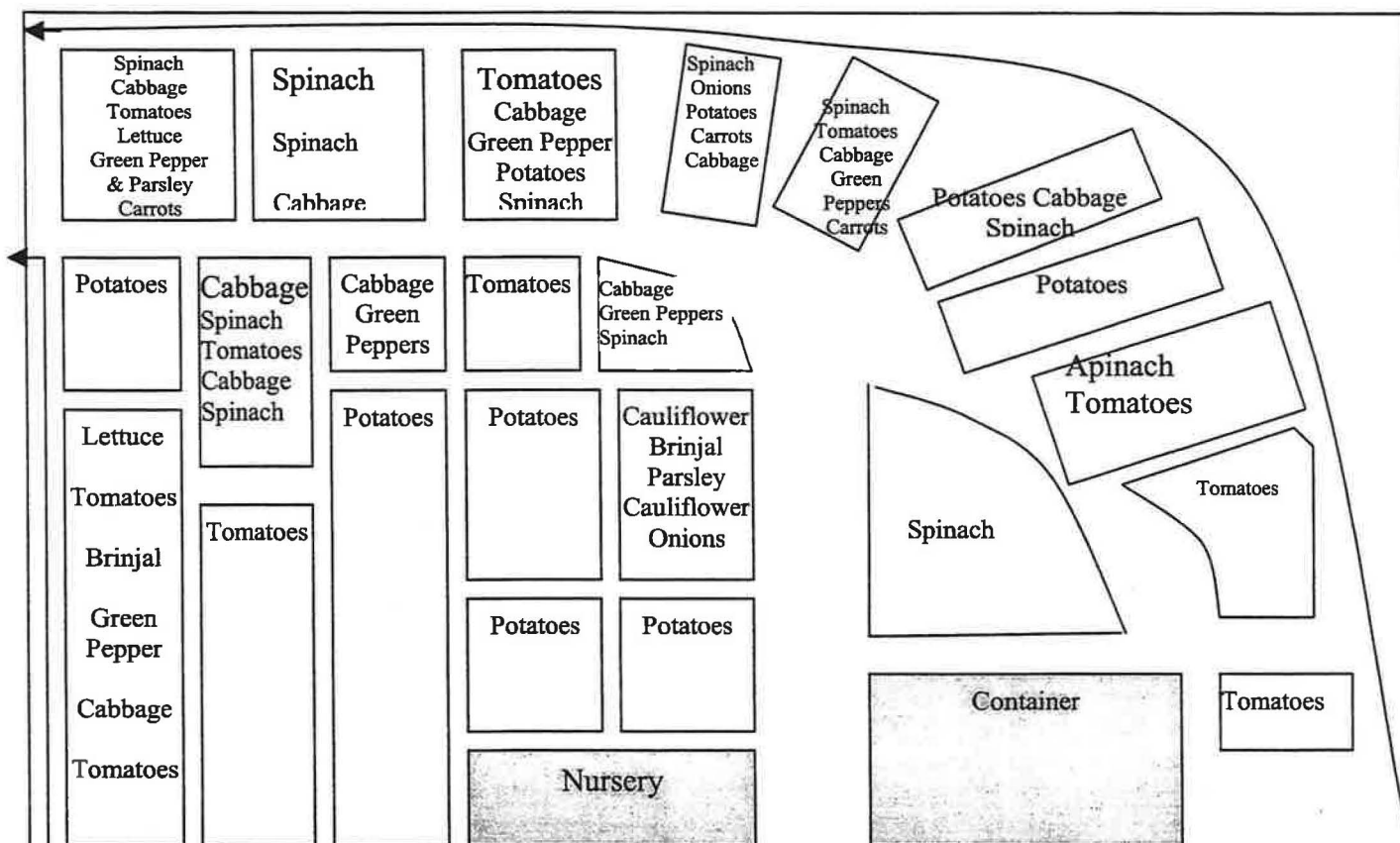
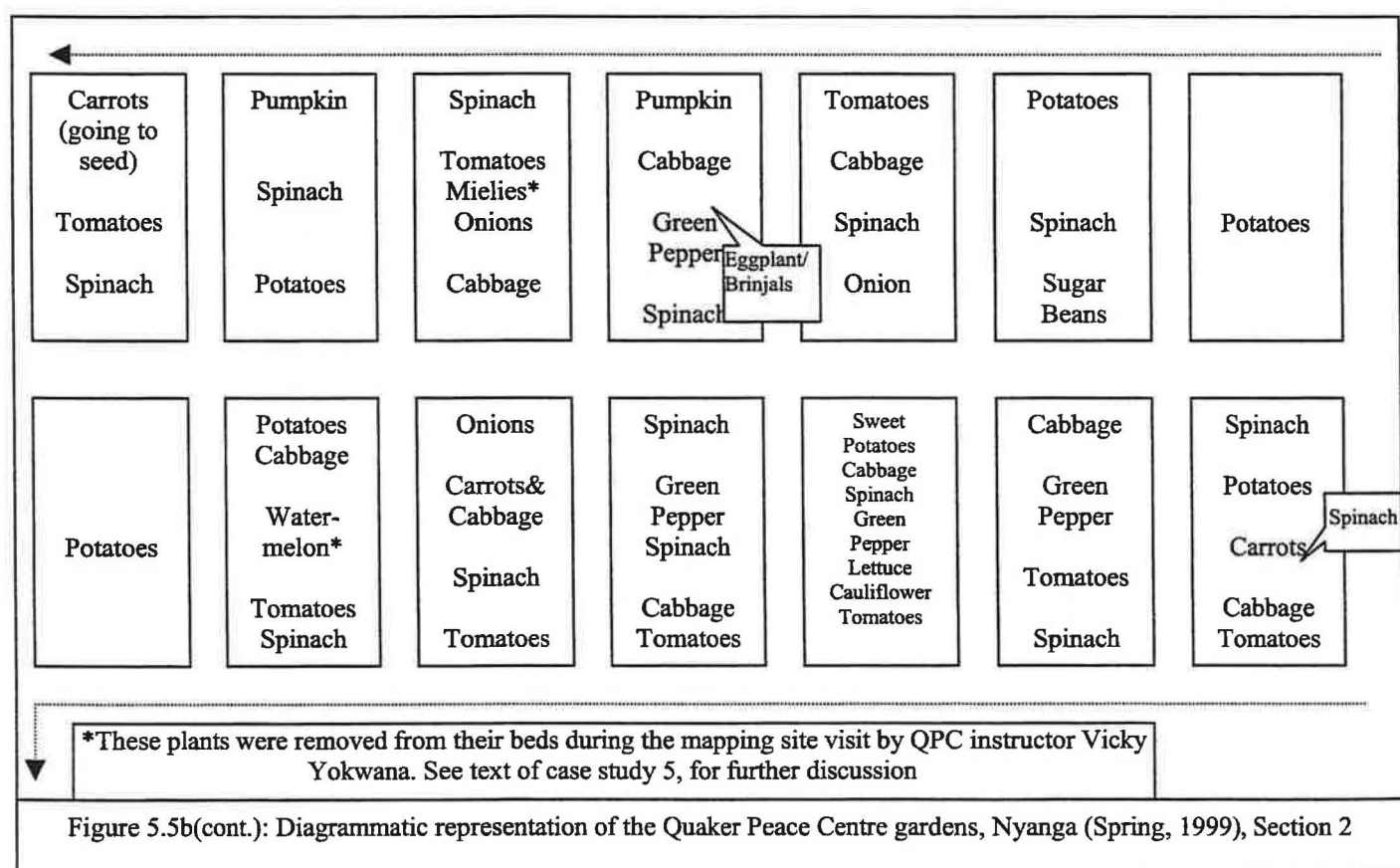


Figure 5.5b: Diagrammatic representation of the Quaker Peace Centre gardens, Nyanga (Spring, 1999), Section 1



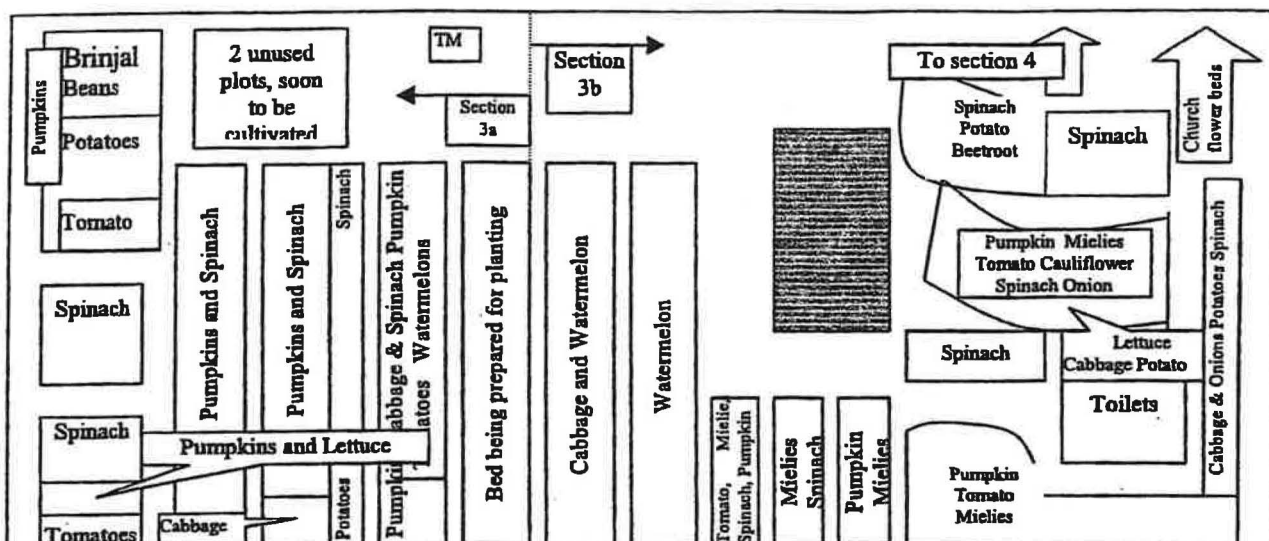


Figure 5.5b (cont.): Diagrammatic representation of the Quaker Peace Centre gardens, Nyanga (Spring, 1999), Sections 3a and 3b

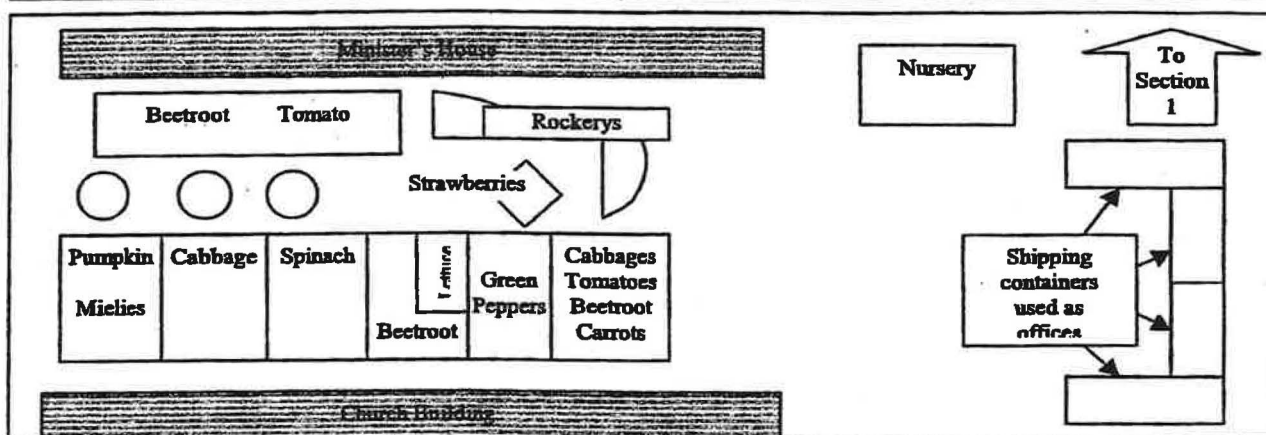


Figure 5.5b(cont.): Diagrammatic representation of the Quaker Peace Centre gardens, Nyanga (Spring, 1999), Section 4

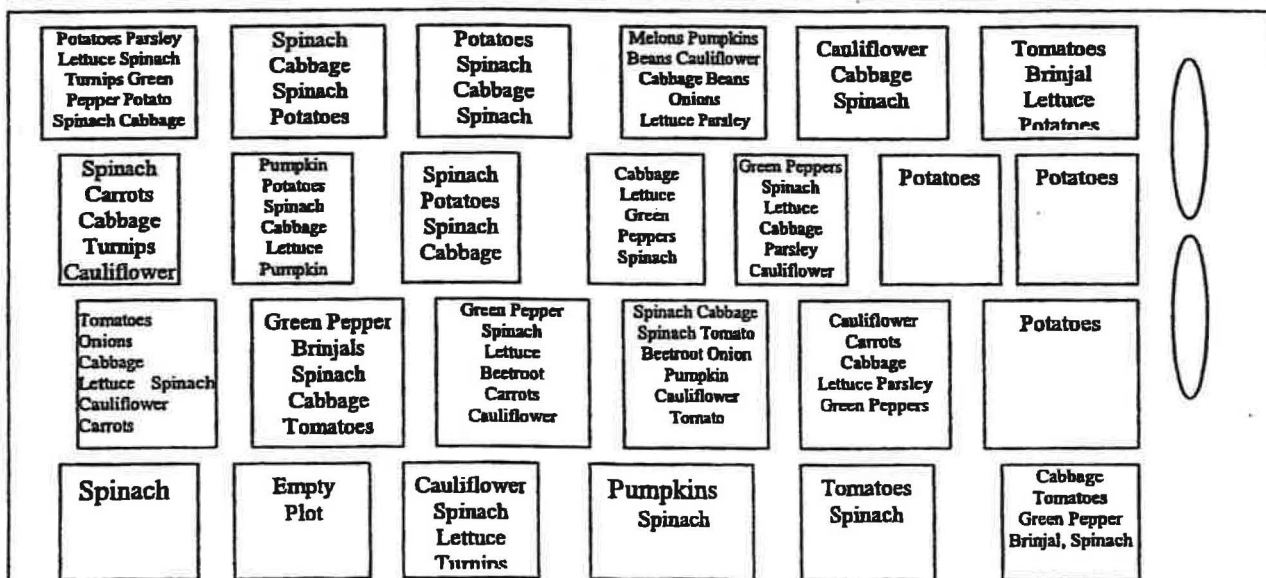


Figure 5.5b(cont.): Diagrammatic representation of the Quaker Peace Centre gardens, Nyanga (Spring, 1999), Section 5

#### **5.5.8 Problems Experienced**

The gardeners feel that their main problem is the lack of land available for vegetable production. As one woman said: *'All the people are greedy for this land, but there is no land'*. As with other projects and gardening groups, snails and cabbage white butterflies (the caterpillars) are among the most frequently cited pest problems experienced by the gardeners. However, these gardeners also identified worms as a problem. Solutions for such pest problems include using wild garlic, vinegar, and soap. One woman mentioned that she and her friends had previously used 'blue death powder' or 'ddt' which was bought from a shop, but she said that they stopped using it because it burnt the leaves of the crops. The Quaker Peace Centre encourages purely organic pesticides and fertilisers. The gardeners also indicated that they use a special 'medicine' when planting. This appears to be a variety of organic fertiliser and/or growth stimulant that was recently acquired by Quaker Peace Centre. No diseases were identified by the gardeners, although they have noticed that spinach leaves sometimes go yellow but they do not know what causes this discolouration.

#### **5.5.9 Use of Produce: Sale, Consumption and Other**

The vegetables grown by the gardeners are either sold or consumed at home. One gardener indicated that her previous experience in cooking for "white ladies" has taught her to be creative with vegetables when cooking. She enjoys the fact even when she cannot get any meat, she can cook the vegetables that she grows, and do so in such a manner that the vegetables, together with some stiff pap (mielie meal), are a sufficient meal on their own.

The benefits of growing vegetables for sale, as cited by gardeners interviewed, included the ability to buy other products, such as meat, bread, soap and paraffin, as well as being able to afford bus fares. Sales usually occur in an *ad hoc* manner. Produce is sold to neighbours or to local community members who see the gardeners with their produce and enquire about obtaining some for themselves. The gardeners are reluctant to simply give their produce away when asked, because their plots are too small to be so generous. The estimated monthly income for those who regularly sell the produce obtained from their plots is about R14 (£1.40p) per month.



## 5.6 Case Study 6: Manyano Support Group, Town 2, Khayelitsha

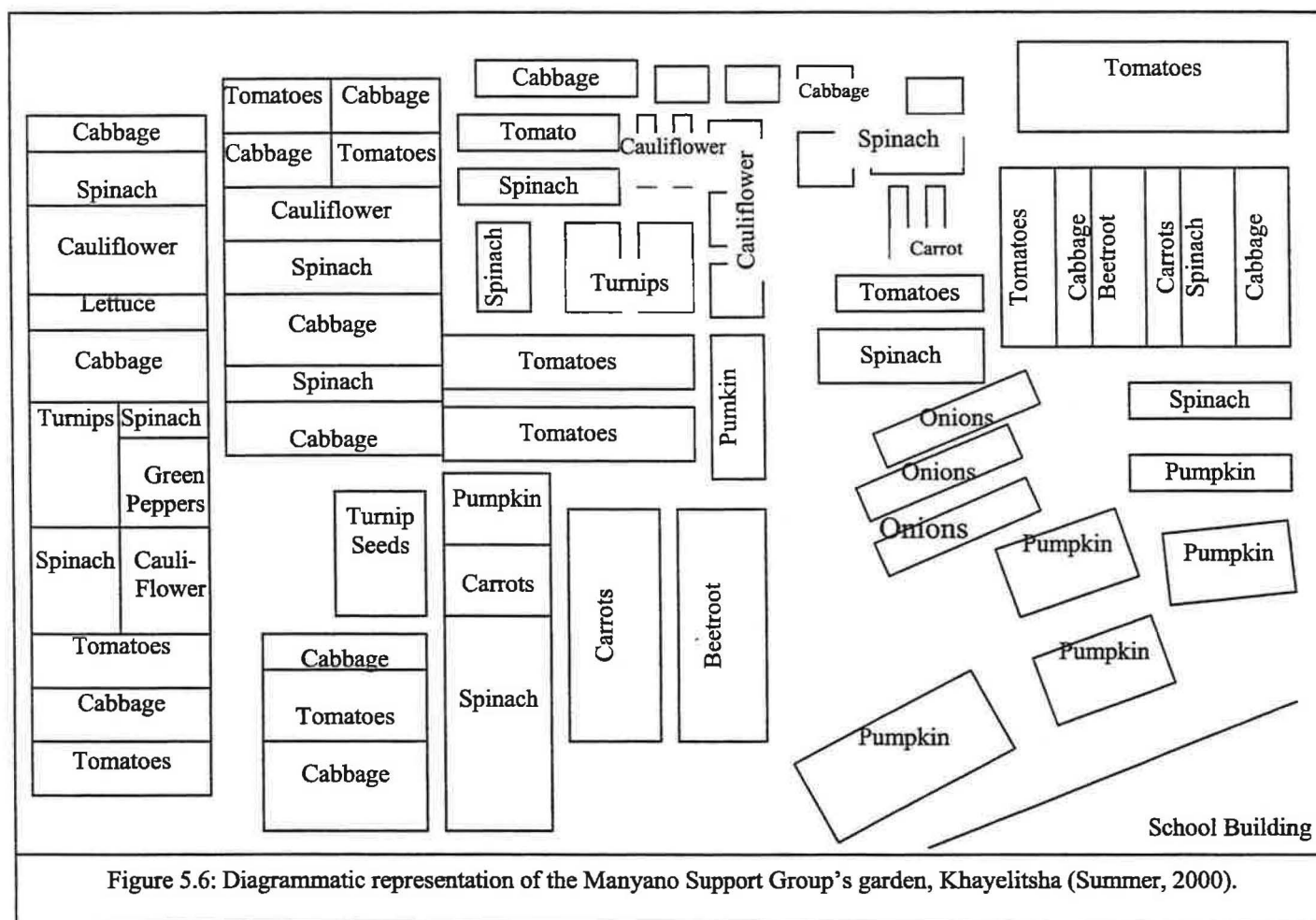


Figure 5.6: Diagrammatic representation of the Manyano Support Group's garden, Khayelitsha (Summer, 2000).

### 5.6.1 Project Establishment & Access to Resources

The Manyano Support Group is a group of women living in Town 2, Khayelitsha, whose activities include vegetable gardening, both at home and on two plots in their neighbourhood, namely at Chuma Primary School and diagonally across the road on the premises of the Nazarene Church (both are located in Town 2, Village 4 of Khayelitsha). (Total plot size is 2000m sq for areas at the school and the church). The group began when two women, in June 1998, started a soup kitchen for the destitute and for local children of school going age. Upon request, one of the local schools, Hopolong Primary School, provided the women with a small room, from where they could operate the soup kitchen. The women also cultivated a small vegetable patch at the school and before long, community interest and support saw a number of other women joining the group. In addition, several women from Manyano Support Group attended a training course at Abalimi Bezekhaya in 1998. Abalimi provided the women with some resources, including seedlings, manure and fertiliser. After several months, the women decided that the land which they were able to cultivate at the school was too small, and they approached the Principal at the nearby Chuma Primary School, to request the use of this school's land. The Principal of Chuma Primary School agreed to the request, and a deal was signed whereby the women were allocated a portion of land at the back of the school.

The chairperson of the Manyano group is a member of the Nazarene church, where the Pastor welcomes the use of church land for the group's vegetable growing activities because these are beneficial to the general community.

The Manyano Support Group is assisted in its vegetable gardening activities by Abalimi Bezekhaya, which has provided training and is also the group's primary source of manure and fertilisers as well as extension support.

### **5.6.2 Membership**

Although there are 25 members who associate themselves with the Manyano Support Group, there are currently only 10 members who are actively involved in the gardening activities that the group undertakes. All of the gardeners are women, although there is one man who was assisting the group with security at the garden at night. All of the women involved in the gardening are the heads of their households. They all live in Town 2, Khayelitsha, and the vast majority come from the Eastern Cape, although from different districts. Because they are all neighbours and local community members, the women knew each other before they got involved in the project. They would see each other at meetings for school, Reconstruction and Development Programme (RDP) Forums and SANCO meetings, and also worked together on the Masakhane Housing Project, building their own houses. The women still participate in such collective activities together.

Before joining the group, prospective members must attend two or three meetings, so that they know what the group's work involves. Following this, people can decide if they want to become members, and if so will pay a joining fee of R10 (£1) for the year, payable on an annual basis.

### **5.6.3 Participation and Responsibilities**

The work in the gardens is done collectively, without any allocation of the land to individuals. Some community members and local school children sometimes assist the group with their activities. An executive committee for the group was elected at a parents' meeting, but decisions are made on a collective basis.

### **5.6.4 Motivation for Gardening and Attitude**

As has been seen in other case studies, motives for undertaking vegetable gardening include food security (especially for children), community development and income generation. Ms. Mavis Mcutshenge, the group's chairperson feels that hunger is a serious problem, and that it impacts on the stability of society. For example, she used an illustration of potential perpetrators of rape who see children looking into dustbins for food scraps and who then use food to lure children into danger. Her perspective is that the support group is trying to eradicate poverty in its community. "*We are looking for money at the end of the day, but we want to build the people first.*" She explained that she would like to see children properly fed, so that they do not steal amongst each other or from teachers' purses.

The community response to the project has been supportive, and the growth of the group has depended on interest from the neighbourhood. There have been no indications of vandalism to date, although the project is still in its early stages and is well protected by the fence of the school.

#### **5.6.5 Cultivation Methods**

The group uses the trench bed method of cultivation, taught by Abalimi. Most of the women are familiar with subsistence gardening activities, because of their rural backgrounds where they watched their parents in the fields and later practised similar farming methods in their home gardens when they came to Cape Town. However, since training with Abalimi, the women have adopted new techniques which they seem to feel are more appropriate and more useful in their present context. Land preparation is done using spades, forks and picks. An interesting variation of the advocated trench bed method is used at the church premises where every alternate bed is trenched, while every other one is merely raised. The plan is to trench the untrenched beds in the next season, but to have produce growing in the interim. Forks, rakes and picks were used in the clearing of the school garden and the establishment of the beds. Although intercropping is recommended by Abalimi, the only example of intercropping visible during the site visit was at the church grounds, where tomatoes and cabbage have been intercropped.

#### **5.6.6 Crops**

Abalimi Bezekhaya has provided the Manyano Support Group with a schedule for planting seasonal crops at the gardens. In Spring 1999, crops grown by the group included beetroot, butternut (squash), cabbage, cauliflower, carrots, green pepper, green beans, lettuce, mielies, onions, potatoes, peas, pumpkin, spinach, squash, tomatoes and turnips. The group tried eggplants (brinjals) but these were unfamiliar to the local people and have therefore been discontinued.

The group's preferences for the most commercially valuable crops include spinach and turnips most, followed by onions, cabbage and potatoes, beetroot and then carrots. Other popular crops are pumpkins, green peppers and lettuce. Spinach was again singled out as a good crop to cultivate, because it grows fast and it tastes good, especially when it is watered every day. During a field visit to the school garden, a dish containing a mixture of potatoes, spinach and carrots was produced and shared among the women present.

#### **5.6.7 Soil**

The soil at both of the gardens is very sandy. At the school, the women also had to contend with rubble that had been dumped at the back of the premises. Aside from clearing weeds, they also had to remove large blocks of concrete and smaller stones from the area before they could cultivate.

Soil improvement techniques used by the group include composting, organic kitchen waste and crop residues. Abalimi has taught the women the value of planting arrangements such as intercropping and crop rotation for the soil, and the group also uses manure teas on the crops. Although the group does not use mulching regularly, it has occasionally obtained hay for mulch and would like to have increased access to mulch in future, but must still establish where to access the necessary resources.

#### **5.6.8 Water**

Watering is done by hand-held hose, although the women sometimes use a circular spray sprinkler. Water for the beds at the school is drawn from the school's tap, to which the women only have restricted access because it is also used by the caretaker at certain times. However, there have previously been problems with the school's tap. When the school supply was not available the women approached a neighbour for assistance, and connected a

hose to her residential tap as a temporary measure. This situation also created restrictions, whereby the women could not use the hose in the late afternoon because the resident required access to the tap for cooking purposes. No greywater is recycled in the garden, because the women fear that the soap is not good for the plants.

#### **5.6.9 Problems Experienced**

Among the agricultural problems encountered by the group, the primary culprits are snails, cabbage butterfly caterpillars and infertile, stony soil. Snails are hand-picked and crushed. The caterpillars and eggs of the cabbage white butterfly are also picked off the vegetables (usually from back of cabbages) and then squashed.

#### **5.6.10 Use of Produce: Sale, Consumption and Other**

Produce from the gardens is used for a variety of purposes, including providing food in the soup kitchen which is then given to others, taking home food for themselves, and selling the food to generate income for the project. At present, the sale of produce is restricted to *ad hoc* transactions that take place when community members approach the gardeners at the garden, to obtain some of the produce. Abalimi is, at present, attempting to link the group into a supply network, but this is still very preliminary. To date, the income from selling vegetables has been saved in the group's bank account, and in future will be ploughed back into the project to buy inputs when financial support is withdrawn from Abalimi. None of the gardeners have been paid for their work in the garden as yet, although they expect that when the garden is earning more, they will share the profits among them equally.



## 5.7 Case Study 7: The Masibambane<sup>83</sup> Neighbourhood Gardening Group, Brown's Farm, Philippi

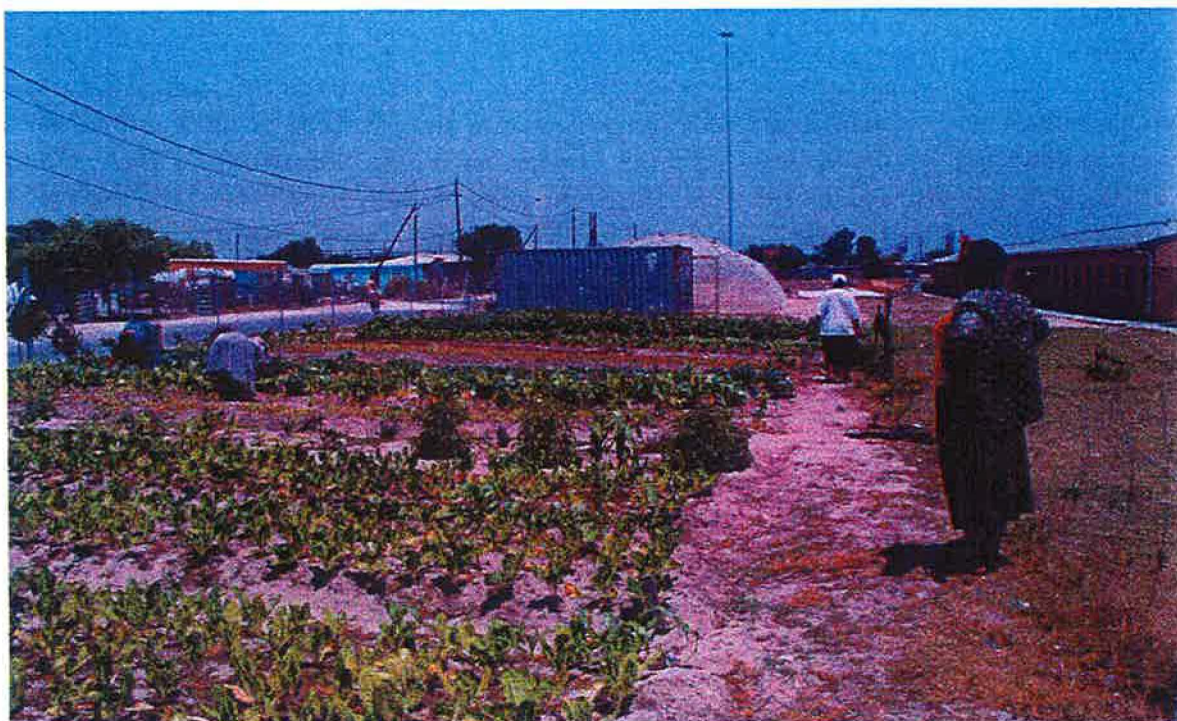


Plate 5.3 The Masibambane Garden at Siyazakhe Primary School (Spring, 1999)

### 5.7.1 *Project Establishment & Access to Resources*

The Masibambane neighbourhood gardening group began in March 1999, on the initiative of a local resident, Monica Duda. She, together with some of her neighbours, attended a training course at Abalimi Bezekhaya. There they met a number of other women from their area who were also interested in vegetable production. Most of the women already had home gardens, and had come to buy resources at Abalimi's garden centre in Nyanga where they met with Abalimi's fieldworker and learnt of the training. The women began to feel that the available space at home was too small and that they needed more land. They formed a group, which is formally constituted, and decided to approach the principal of the nearby Siyazakha Primary School to request the use of the school's land for their farming activities. Permission was granted, and an agreement was signed that allowed the women to use a small piece of land at the back of the school, measuring approximately 1500m<sup>2</sup>. At present approximately 500m<sup>2</sup> of this is under cultivation. In return for the use of the land, the school can use the gardens for teaching purposes. Masibambane is supported by Abalimi Bezekhaya and has also received input from government social services, including a greenhouse tunnel in which they plan to cultivate tomatoes. The group's first crop was planted in September 1999.

Abalimi Bezekhaya is currently providing the group with seeds and seedlings, chicken and pig manure, pest control substances such as tobacco dust, and bonemeal and other fertilising substances. Abalimi also gives the group advice and technical support, with a fieldworker visiting the group two to three times a week, and more frequently during busy periods such as planting.

<sup>83</sup> Masibambane means 'to be whole together'.



The women have undergone marketing and management training in Hanover Park, sponsored by government social services. Further training is also planned for some members of the group to learn how to cultivate crops in the greenhouse tunnel provided by government social services in response to an application made to government by the principal of Siyazakha, Mr Mdingi.

The women were visited by a representative from the Department of Land Affairs (Summer 1999) who was invited by Mr Mdingi to come and see the work of the group at the school. This representative apparently told the women about the Department's land policies and suggested that they pay a visit to the Department's offices in Cape Town, which they have yet (Summer 2000) to do. The group does not seem to fully understand the implications of the Department's policies.

The agreement that the women have with the school does not have a time limit/lease component. They believe that as long as they are happy to work the soil at the school they will be welcome to do so. The women have their own set of keys for the school gates.

#### ***5.7.2 Membership***

Originally, the group started with 30 members. However, because of the limited amount of land available for cultivation at the school, and because some of the women lived at a distance from the school, the group split, with 18 members leaving Masibambane to begin their own group elsewhere.

All of the members are female, and 50% are the heads of their households. Before forming the group, the women already knew each other, either because they were already neighbours, or because they met at the Abalimi training course. All of the women previously resided in various districts in the Eastern Cape, and all of the members live in the area surrounding Siyazakha Primary.

Masibambane does not have membership criteria at present, since the existing members do not envisage any new members joining the group. In fact, they are not willing to consider the prospect because they feel that even the current membership is too high, given the limited size of the land on which they are able to work. The women have indicated that they would prefer a membership of around eight members, both because of the limited land and also, related to this, because the benefits of production are greater when shared among fewer members. To become a member, each of the women paid a R10 (£1) joining fee, and is also expected to pay a monthly contribution of R10 towards project costs. The aim of collecting the monthly sum was originally to enable the group to buy tools. However, the group has been informed that government social services will be providing them with tools. They have therefore decided to save the money and use it in the future, to buy other inputs for the garden.

#### ***5.7.3 Participation and Responsibilities***

The group shares communal responsibility for the garden. Aside from an Abalimi fieldworker, Maureen Onceya, no one labours in the garden who is not a member of the group. The group's current form of communal operation has created some problems because certain members do not regularly participate in the gardening activities. These same people nevertheless believe that they are entitled to share in the benefits of the production, including the money earned from the sale of the garden's produce. A solution to this problem has been proposed by Ms Onceya who says that the women should have a timetable for work activities,

and keep a register of who is doing what, to determine who does their jobs properly. Such a system would provide tangible proof of poor participation. The women agree that such a system is necessary. However, by the end of this field work they had yet to implement it.

#### **5.7.4 Motivation for Gardening and Attitude**

The women participated in the garden for two main reasons: 1) in order to obtain food for home consumption and 2) in order to generate income.

When Masibambane first started its work at Siyazakha Primary, the neighbouring community was scornful, saying that they were wasting their time by working in the garden for no salary. However, now that they have seen the vegetables growing, the people in the neighbourhood are interested in joining themselves.

#### **5.7.5 Cultivation Methods**

Masibambane currently practices the trench bed method of cultivation which is taught by Abalimi during training. To prepare the land, the group borrowed spades from Abalimi,<sup>84</sup> and dug the knee-deep trenches, lining them with organic matter before planting. Crop rotation was advocated by Abalimi, to be practiced by the women, as was intercropping, although the only visible example of intercropping to be seen during the site visit was a combination of cabbages and onions in two of the beds. Among the cultivation techniques that the group have adopted since training with Abalimi, perhaps the most striking is the extensive use of windbreaks. The women have lined several of their plots with a row of mielies which when fully grown will form living windbreaks. These mielie plants have been planted without trenching or applying fertiliser because they are not really intended for harvesting.

#### **5.7.6 Crops**

Crops grown by the group include beans, cabbage, carrots, eggplant, green pepper, lettuce, mielies, onions, potatoes, peas, pumpkins, spinach, tomatoes and turnips. The group also plants some leeks, and Abalimi's fieldworker has provided a range of herbs, including marjoram, sage, rosemary, rue, chives and wild garlic. The group has thought about planting cauliflower and broccoli in future, but avoids celery and cucumber because these are not perceived to be 'African' foodstuffs.

The group sees spinach as their main crop and, as with other case study groups, indicated that it provides high yields, is well liked by the local community market, and is therefore a good income generator. Spinach was rated the most important of all the crops, followed (in order of preference) by lettuce, green beans, carrots and tomatoes. Cabbage was singled out as one of the crops that has a poor yield, taking three months to grow and yet providing only a single harvest.

With respect to the crops that the women will cultivate in the tunnel that they have been donated, it is interesting to note that they have opted to grow tomatoes, even though they were advised by Abalimi that they could also grow other crops, such as strawberries. They have opted to ignore this second option, for the present, because they do not feel that there is a market for them in their local community.

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<sup>84</sup> The women will be getting their own implements from Social Services in January 2000.

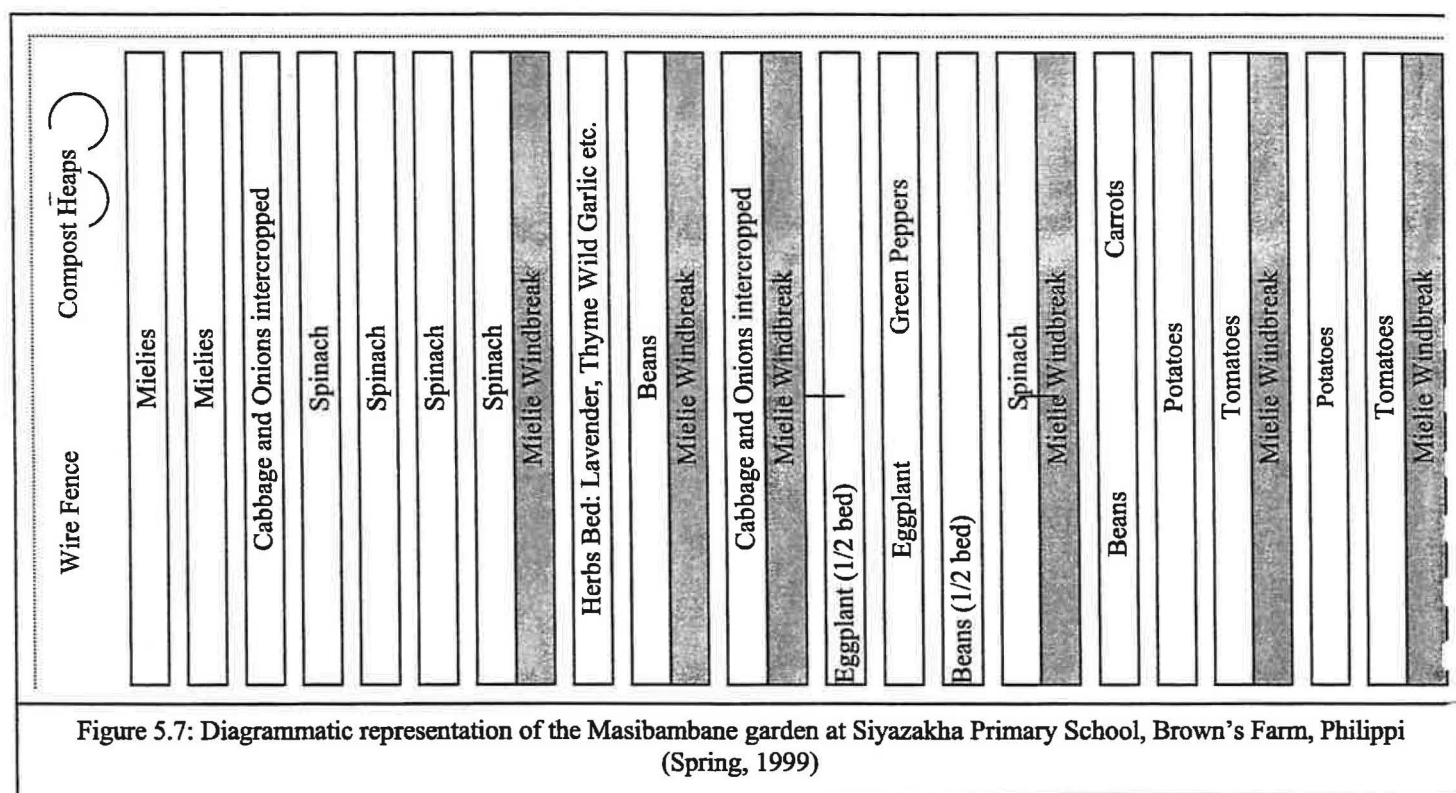


Figure 5.7: Diagrammatic representation of the Masibambane garden at Siyazakha Primary School, Brown's Farm, Philippi (Spring, 1999)

### 5.7.7 Soil

The Masibambane neighbourhood gardening group uses organic household waste, crop residues, mulching and chicken and pig manure for soil maintenance and improvement. The soil at the school is very sandy, and problems relating to the soil include poor fertility, rapid evaporation rates and wind blowing the sand away, resulting in exposed plant roots.

### 5.7.8 Water

The women currently have access to the school's tap for watering their crops, and use a hose pipe and sprinkler to do so. They do not currently pay for the water and seem unperturbed by the cost of water, seeing it only as a resource that is plentiful in supply. The women do not currently recycle greywater, because they perceive all soapy water to be bad for the crops. During the interviews, Abalimi fieldworker Maureen Onceya, who was translating at the time, explained that certain types of greywater may be recycled, citing examples such as dishwashing water containing sunlight washing-up liquid or water that has soapsuds from 'bar-one soap' in it. The women appeared to accept that using these kinds of water on the crops would be "alright," but greywater was still not reused because they did not have to pay for water, which they could access easily.

### 5.7.9 Problems Experienced

Aside from the problems with group dynamics and people not doing their duties properly, the group experiences a number of agricultural problems similar to other case studies in the Cape Flats area. These include the cabbage butterfly caterpillars, snails and poor soil fertility. Pests are eradicated by hand-picking them from the vegetables and destroying them. Tobacco dust is also used to get rid of the snails. In addition, Ms Onceya indicated that the intercropping of onions with cabbage was intended to repel pests.

#### ***5.7.10 Use of Produce: Sale, Consumption and Other***

The primary uses of the Masibambane garden's produce are sale and home consumption. The women do not simply give the food to others, because they say that they do not have enough land to have a surplus to give away. Mostly the women sell their food to their neighbours, although Abalimi has been trying to help them by taking produce to other areas and selling it on their behalf. The monies derived from the sales are collected and shared equally among the members and as indicated above the division of benefits has created some problems because of inequalities in terms of labour expended at the garden.

#### ***5.7.11 Other Activities and Future Plans***

The women feel that being part of a group has provided them with an opportunity to make new friends, and it is beneficial because they can get help and advice from each other. They have also started to plan for future activities together, and currently aspire to establish their own combination of home industries. For instance, the women of Masibambane would like to begin pottery, bead-making, mat weaving and production of tiles for the home. They have apparently seen similar activities being undertaken by a group of women in Khayelitsha. The women would like to do a variety of activities, so that there are not too many producing the same items for sale.

### **5.8 Case Study 8: The Phatisanani Women's Gardening Group, Brown's Farm, Philippi**

#### ***5.8.1 Project Establishment & Access to Resources***

This group of gardeners was originally part of Masibambane but, as indicated above, this group of women left to start their own group garden at a school closer to their homes. The women approached the principal of Mzamomhle Primary School, and discussed their ideas for utilising the school's vacant land for a vegetable garden. The principal suggested that they put their request in writing. He also wanted to know who would be assisting the women with their project. Maureen Onceya from Abalimi met with the principal to discuss the idea, and Abalimi also wrote a letter pledging its support to the project. An agreement was reached, and the women began to prepare the land for cultivation in June 1999. 1500m<sup>2</sup> was allocated with about half this area under cultivation at the time of research.

#### ***5.8.2 Membership***

After this group left Masibambane to begin its own activities there were only seven members, but the group has since expanded to twelve, all of whom are female and above the age of 40. The increase in membership resulted primarily from other women in the community seeing the results of the women's gardening activities and asking if they could join. Anyone may join the group, but before joining prospective members must read the group's constitution and agree to abide by its contents. The procedure for becoming a member was decided jointly among the existing members. The group has an executive committee of four people.

There is, as yet, no membership fee, although a R10 joining fee is being considered. Nevertheless, the women are engaged in a savings scheme for their garden, whereby each member pays R10 a month as a contribution towards expenses such as seeds. These expenses are, currently subsidised by Abalimi Bezekhaya, but the women continue to save in anticipation of Abalimi withdrawing financial support for the garden at some stage in the future.



There are two female headed households in the group, and most of the members are resident in the Nyanga/Philippi area. All of the members are previously from the Eastern Cape. Seven members were home gardeners prior to their involvement in the group. Some of the others had previous experience of farming from the rural areas. The women were not involved in shared activities before becoming involved in the project, but they did know each other because they are neighbours.

### **5.8.3 *Participation and Responsibilities***

No one else except the members of the group and the Abalimi fieldworker Maureen Onceya participates in the gardening activities at Mzamomhle Primary School. Unlike most of the other case studies featured in this report, the garden is not cultivated on a communal basis. Rather, each gardener has between two to four plots which are her own, and they are all free to prepare more plots for themselves if they so wish. Each woman therefore decides for herself what will be planted in her beds, although the choice depends largely on what seeds or seedlings are being supplied by Abalimi. As has been seen in other case studies, the activity of watering the garden is one which is often undertaken communally. Those who are tending their plots at times suitable for watering, particularly in the early morning, usually water everybody's plots.

### **5.8.4 *Motivation for Gardening and Attitude***

The main motivations of the group are household food security and income-generation. One woman indicated that she became involved after she saw the project and because she was "*hungry, but without money*". The women feel that they have the support of the local community. Those walking by often praise the garden, and some have said that they would also like to join.

### **5.8.5 *Cultivation Methods***

Although the women have been trained by Abalimi to use the trench bed method of planting, they have opted to use raised beds instead, because the ground at the school is too difficult for them to dig properly. The group would like to grow vegetables on a continuous basis, but since they have just begun their garden they are waiting to see what crops are best grown.

At the time of interview (Summer 2000), Abalimi Bezekhaya was the group's main source of seeds/seedlings and tools/equipment, as well as of technical knowledge and support. Occasionally the women buy seeds, fertiliser and pest controlling tobacco dust from the Abalimi's garden centre in Nyanga.

### **5.8.6 *Crops***

The main crops that are grown by most of the women are beans, beetroot, cabbage, carrots, green pepper, lettuce, mielies, onions, potatoes, pumpkin, spinach, tomatoes and turnips. Peas are grown, but only in winter. Group ranking of the crops grown showed spinach to be the most popular, followed by cabbage and then carrots, with tomatoes and lettuce in fourth and fifth place respectively. Spinach was favoured because it grows quickly and can be harvested even a couple of weeks after planting. Cabbage was perceived to be the most difficult crop to cultivate.



#### **5.8.8 Water**

Water for the garden is obtained from a tap on the school's premises, and watering is done using a hand-held hose-pipe. The group does not recycle greywater in the garden, because there is plenty of water available from the tap, supplied free.

#### **5.8.9 Problems Experienced**

Snails are a problem at this garden, but the cabbage white has not been a problem. The school in which the garden is located is securely fenced, and the women are not worried about theft. In fact, they feel that the community watches their garden for them, and would report any incidents to them.

#### **5.8.10 Use of Produce: Sale, Consumption and Other**

The produce is both taken home for consumption and sold. Customers come mainly from the neighbouring community, but Abalimi is trying to assist the group with marketing. This group is one of several that has supplied vegetables to organic markets with the assistance of Abalimi staff who transport the produce to the buyers. Problems have arisen with the distribution of benefits, because of confusion surrounding the proceeds of sale. The situation was being addressed at the time of interview. The plan, for future sale proceeds, is to pay out the benefits proportionally to those who have contributed to each days' sale.

#### **5.8.11 Other Activities and Future Plans**

Aside from their gardening activities, most of the women are also involved in housing projects in their areas. In future, the group plans to continue gardening at the school and even extend the garden, which it has, in fact, already begun to do. The women would also like to obtain further training in vegetable gardening.

## 6. HOUSEHOLD SURVEYS

### 6.1 Introduction

This section focuses on urban agriculture at the household level. It is based on transect walks and interviews that were conducted in three townships on the Cape Flats, namely Langa, Nyanga and Khayelitsha in January 2000. Initially, the selection process of households to be surveyed was one in every ten, but this was modified after the first day of fieldwork to one in every five. When members at a selected household declined to be interviewed, or were unavailable, it was replaced with a neighbouring household next-door or across the street, whichever was first available. Specific profiles are provided about survey respondents, gardening and non-gardening households, and the gardeners themselves. The results are categorised under a number of headings relating to the following subjects:

- Previous experience in gardening
- Reasons for wanting or having a garden at home
- Types of advice and/or sources of assistance available to or provided by home gardeners
- Household expenditure on vegetables for those with and without home gardens
- Time taken to establish a home garden
- Access to resources for home gardeners
- Types of crops grown and/or favoured by home gardeners
- Problems experienced by home gardeners
- Use of produce
- The attitude of neighbours and the local community attitude towards home gardeners
- Aspirations of home gardeners
- Links between home gardening and garden projects and/or group gardening

#### 6.1.1 *Aims and Objectives of Household Surveys*

The aims and objectives of the household surveys were:

- To establish the nature of gardening activities (or the lack thereof) in the areas surrounding some of the case study garden projects discussed in section 5, in order to better understand the relationships between garden projects and home gardening, if any;
- To obtain information on the socio-economic situation of gardening and non-gardening households;
- To complement similar studies conducted in Mamelodi, Pretoria and in peri-urban areas of Harare, Zimbabwe and to compare and contrast the findings with information from elsewhere.



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The results of the transect walks were tempered by a number of factors:

*Language:* Differences in languages between fieldworkers and interviewees sometimes resulted in qualitative data that could have a number of different interpretations. In this regard, every effort was made to clarify the meaning of data with the fieldworkers subsequent to each day in the field.

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## 6.2 Findings

### 6.2.1 Profiles of respondents, and gardeners

A total of 119 households were surveyed, of which 77 were not involved in vegetable production. In the remaining 42 households there were either signs of vegetable production or the respondent indicated that it is the intention of the household to begin vegetable gardening (or resume the activity) in the near future.<sup>85</sup> Thus, approximately 35% of the sample population is considered to undertake vegetable gardening activities.

The average age of the respondents was 41 years. The average age of the respondents from each of the sample areas ranged from 33 (in Khayelitsha) to 47 (in Langa). Females constituted 61% of the sample population. Half of the respondents were single,<sup>86</sup> 38% were married and the remaining 12% either divorced, widowed or separated.

In non-gardening households, 60% of the households had a male head, while in gardening households this figure dropped to 52%. The Transkei was the most common previous residence in both groups (60% for non-gardening households and 57% of gardening households), followed by the Ciskei (25% of non-gardening households and 33% of gardening households). None of the respondents whose families originally come from Cape Town were from gardening households. Less than 10% of gardening households came from other areas (including the provinces of Kwazulu-Natal and the Free State). 77% of non-gardening households had some form of household income through formal/informal employment.

The average age of gardeners ranged from 38 years (in Khayelitsha) to 53 (in Langa), and the overall average age of gardeners was 45 years. Just over half (57%) of the gardeners were female. 39% were married, 37% single, with 24% widowed or separated. 93% of the gardeners had some education, but only 38% had education beyond primary level. 60% of gardeners canvassed were not in formal employment at the time of the interviews (Summer, 2000). Forms of employment for the remaining 40% include formal and informal employment or casual labour.

### 6.2.2 Gardening experience

#### 6.2.2a Levels of experience

60% of the households surveyed had someone with previous experience in gardening. However, most of these households were not involved in vegetable gardening at the time (Summer, 2000).<sup>87</sup> Approximately 55% of the gardening households interviewed indicated that one or more household members had previously been involved in gardening activities while 62% of non-gardening households had previous experience. In both Nyanga and Khayelitsha, the percentage of gardeners who had previous experience was as low as 22%. Therefore it appears that previous experience was not a significant factor in decision making regarding vegetable growing.

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<sup>85</sup> Three interviews were conducted with households that did not show signs of vegetable production, but where household members claimed to garden at other times of the year or said that they planned to start a vegetable garden soon.

<sup>86</sup> South Africa's townships have amongst the highest number of female headed households in the world (see Meadows, 1998).

<sup>87</sup> This was due to respondents indicating that someone in the household gardened for periods at a time but when circumstances changed e.g changes in household members or employment gardening stopped.



### 6.2.2b Sources of experience

The majority of gardeners (36%) obtained their experience by trial and error. Friends/family/neighbours are another important source of experience providing 26% of the gardening sample population with knowledge about cultivation. Organisations rank third as gardeners' source of knowledge. A further 22% relied on two other sources, namely schools (14%) and the work place (8%). Work place knowledge was more *ad hoc* than organised. For instance, one gardener learnt about gardening in the affluent Cape Town suburb of Constantia, where his mother was a domestic worker. This respondent began to assist a fellow employee, an older male employed as gardener on the property, and in this way gained access to information about plants and cultivation. The family for whom his mother worked was also a source of seeds and equipment for the respondent's own garden at home, but since the employer has moved he is without work and/or a support base for his own garden. Gaining experience from gardening in other peoples' gardens was also associated with a tendency to grow more ornamentals, and less common or more unusual plants (such as succulents). For instance, one teenage boy learnt to garden from his brother who tended the Rose Garden in a white suburb's golf course. The teenager said: *'I want to grow the best roses in the world'*.

Figure 6.2



Many residents with previous experience in gardening had previously been exposed to farming activities and vegetable growing rural areas such as parts of the Transkei and Ciskei in the Eastern Cape,. One woman had even undergone training in Umtata (the capital of Transkei), at a project run along similar lines to those supported by urban agriculture NGOs in Cape Town. That there is some rural-to-urban transfer of knowledge is evident in comments such as: *'Loam soil is good. We have it in the Transkei'* (Nyanga resident). However, the unique conditions facing gardeners in the Western Cape, and particularly the Cape Flats environment, sometimes meant that previous gardening practices learnt elsewhere are not applicable on the flats. The need for training that is specifically geared to gardening in the Cape Flats was evident in one woman's comment, about the support that she receives from the Quaker Peace Centre: *'I like it [having a plot at the QPC garden in Nyanga] because I want to get more knowledge about how to plant things in a city because it is different from the Eastern Cape'* (Nyanga resident).

### 6.2.3 Motivation for gardening<sup>88</sup>

#### 6.2.3a Reasons for not having a garden

Among respondents living in homes without a garden, lack of space was the highest ranking reason for why they did not garden. Some indicated that space which may appear available is actually used for alternative uses, including parking of cars or as a children's play area. The erection of informal houses in backyards, known as "shack-farming", was only cited by one

<sup>88</sup> Three respondents were interviewed as though they had gardens because they said that there is usually a vegetable garden on the property and/or they plan to have such a garden in the near future.

individual as the reason for lack of space. However, the diagrams that were drawn of household plots indicate that this is a prolific practice, which does limit the space available for cultivation (see for example Figures 6.4a and 6.4b)

Nonetheless, the conflicts that arise between housing and vegetable cultivation are not limited to spatial aspects. Some families, notably those living in informal/less formal dwellings (such as those constructed of zinc, corrugated iron and/or wood) were reluctant to start a garden because of an expectation that new houses would soon be built in the area. As one resident, living in a zinc and wood house, stated: *'I want to change things in my garden, but my problem is that the council will come and build new houses and stand on and kill my plants when they are building'* (Khayelitsha Resident).

The second and third highest-ranking demotivations to gardening activity cited by non-gardeners were problems with the soil (usually described as the soil being too sandy) and a lack of time or energy to work in the garden.<sup>89</sup> Other explanations for the lack of on-plot cultivation of vegetables included lack of experience, lack of access to resources, lack of security, a preference for non-vegetable gardens, lack of ownership of the premises, proximity to other sources of vegetables (such as shops or market places), the lack of a garden prior to purchasing a property, laziness and pests.

#### 6.2.3b Reasons for having a garden

Among those involved in vegetable gardening, the highest-ranking reason for undertaking this activity was to save money, followed closely by the pleasure obtained from gardening. The desire to produce home grown vegetables for consumption was the third highest-ranking reason for having a vegetable garden. As one Khayelitsha resident said: *'Veg from the shop is old and stale, but my veg is fresh'*.

Just under 10% of gardeners said that beautification of the property was an important motivation. Other, less frequently mentioned, reasons for gardening included helping others or doing gardening because others like the results, selling the produce, using one's time effectively when unemployed, using previous experience to benefit the family and charging others to take photos of the garden.<sup>90</sup> Of the nine gardeners who said that they sell their produce, only two chose to identify the sale of produce as a motivating factor. This could be influenced by the fact that some of the gardeners only sell produce when they have a surplus (see section 6.2.5).

The value attached to growing flowers, trees and grass, especially in the front of a plot, was highlighted by one Nyanga resident, who had both a backyard vegetable patch and a flowerbed in the front of the house. She indicated that her interest is *'in the front garden'*. Similarly, the importance placed on beautifying the home is illustrated by one Khayelitsha resident's response: *'It is important to have garden flowers. Just to show life goes on.'*

The pride taken in the garden itself, also extended, in some instances, to the produce grown and/or other gardening-related activities, such as training courses. For instance, during the

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<sup>89</sup> At several households previous gardening activities had been interrupted, for reasons such as visiting family and/or going on holiday, but were to be restarted as soon as possible.

<sup>90</sup> This later reason was given by one individual, who grows vegetables along the edges of a patch of lawn in the front yard of his house. This gardener also lives along a main road and allows people to have photographs taken in his yard, for R20 a photo-shoot.

Nyanga transect walk, one gardener showed the fieldworkers her certificates from training courses run at QPC. In Khayelitsha, another resident was clearly very proud of the onions that she had produced in her front yard. For some residents, the reasons for gardening are multiple, as one female resident in Khayelitsha responded: *'I want to be a farmer. I want to save my money. I want to help the community.'*

#### 6.2.3c Reasons non-gardening households wanted a garden

71% of families without a garden indicated that they would like to have one. The most frequently cited reason for this was the enjoyment of gardening (23%). This was followed by growing fresh vegetables for home consumption, saving money, selling vegetables, beautifying the property and utilising previous experience in gardening. See Table 6.1.

**Table 6.1: Reasons for Wanting a Garden (non garden households)**

	Langa	Nyanga	Khayelitsha	TOTAL	Rank
No reason	11	5	0	16	-
Enjoyment	4	1	8	13	1
Consumption	3	3	4	10	2
Save money	2	1	6	9	3
Sale	1	2	5	8	4
Beautification	1	2	4	7	5
Previous experience	0	1	1	2	6

#### 6.2.3d Relationship between employment and wanting a garden

Among the households without gardens, 89% of those without employment said that they wanted a garden, while 26% of those in formal or informal employment indicated that they were not interested in having a garden, mainly because they did not have the time for gardening.

**Table 6.2: Motivation for Gardening versus Employment Status**

	Want a garden	Do not want a garden	TOTAL
Employed	39	20	59
Not employed	16	2	18
<b>TOTAL</b>	<b>55</b>	<b>22</b>	<b>77</b>

#### 6.2.3e Relationship between previous experience and wanting a garden

Among non-gardening households, 44% of those who wanted a garden had previous experience in farming or gardening activities. 18% of those with previous experience said that they did not want a garden, while 27% of those without prior experience nevertheless desired to have a garden.

**Table 6.3: Motivation for Gardening and Experience of Gardening**

	Want a garden	Do not want a garden	TOTAL
Experience	34	14	48
No experience	21	8	29
<b>TOTAL</b>	<b>55</b>	<b>22</b>	<b>77</b>



## 6.2.4 Assistance or advice to gardeners

### 6.2.4.a Sources of assistance

64% of all gardeners receive some form of assistance (see below) from other members of the household. This level of assistance is highest in Nyanga, where 83% of households assist gardeners with their activities, while in each of the other two townships the figure is closer to 50%. Levels of assistance from outside the household were much lower, with only 17% of gardeners receiving non-household assistance (see Table 6.5).

**Table 6.4: Household Assistance for Gardeners**

<i>Township</i>	Yes	No
Langa	4	5
Nyanga	15	3
Khayelitsha	8	7
<b>TOTAL</b>	27	15

**Table 6.5: Assistance for Gardeners Received from persons outside the Household**

<i>Township</i>	Yes	No
Langa	2	7
Nyanga	4	14
Khayelitsha	1	14
<b>TOTAL</b>	7	35

Some would-be gardeners indicated that they require assistance with re-starting their gardening activities. Sometimes it appeared that instead of offering assistance, household members either actively opposed the use of an area for vegetable gardening or indirectly prevented this, either by utilising the space for other purposes (including as a recreational area or residential space) or simply not offering assistance where it was needed. For instance, two elderly women in Khayelitsha who had previously had vegetable gardens in their yards, and wanted to do so again, felt that if they could obtain the assistance of local boys, to clear their yards of heavy rubble and dig the hard earth, then they would be able to cultivate on their plots. They indicated that the boys working at the New Crossroads site could help them.

In another case, the gardener's husband had died. He had been her source of knowledge and used to assist her with the garden, telling her what vegetables to plant as well as how and when to plant them. She stated that this was because: '*he was educated in that [gardening]*'. The subsequent lack of assistance for her gardening activities, coupled with her own lack of energy to work in the garden, reduced her garden to a few shrubs and flowers, without any vegetables.

59% of the non-gardening sample population indicated that they did not seek assistance or advice from others. Of the 40% of those who did seek advice, 64% said that they also provide assistance to others. Thus, 26% of the non-gardening sample both sought and gave assistance or advice, while 17% neither sought nor gave assistance or advice.

**Table 6.6: Advice Sought and Given**

<i>Seek assistance/advice</i>	<b>Yes</b>	<b>No</b>
Langa	2	7
Nyanga	6	12
Khayelitsha	9	6
<b>TOTAL</b>	17	25

<i>Provide assistance/advice</i>	<b>Yes</b>	<b>No</b>
Langa	4	5
Nyanga	12	7
Khayelitsha	13	1
<b>TOTAL</b>	29	13

<i>Two-way information exchange</i>	<b>Seek assistance/advice</b>	<b>Do not seek assistance/advice</b>	<b>TOTAL</b>
Provide assistance/advice	11	18	29
Do not provide assistance/advice	6	7	13
<b>TOTAL</b>	17	25	42

One of respondents interviewed during the Khayelitsha transect walk, who was also a gardener at the SCAGA garden (see Case Study 4), felt that when visitors come to visit the garden she also has an opportunity to share information with them, not only her neighbours.

#### 6.3.4b Types of assistance

Means of assistance offered by household members include watering, digging (sometimes referred to as “ploughing” although there was no evidence of a plough having been used, and generally the areas under cultivation were too small to justify the use of a plough), cleaning the garden or weeding it, planting seeds and seedlings, pruning trees and bushes, or providing financial support for the purchase of seeds. Another form of assistance, which was not directly stated but was implicit in answers to other sections of the questionnaire was supplying gardeners with seeds and other resources from one’s place of work.

**Table 6.7: Assistance Activities by Household members**

<i>Assistance activities</i>	<b>No.of times cited</b>	<b>Rank</b>
Watering	15	1
Digging/Ploughing	5	2
Cleaning/Weeding	5	2
Planting	4	3
Pruning	1	4
Financial support	1	4

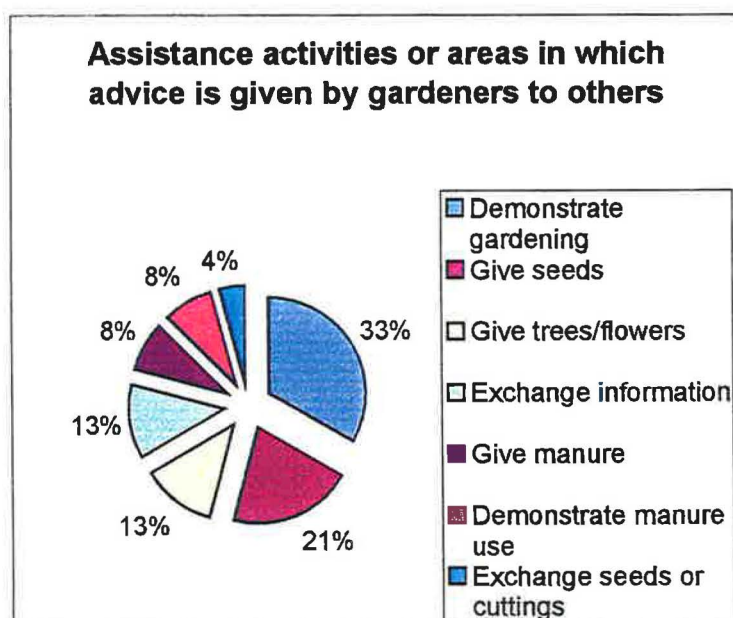


Figure 6.3

Forms of assistance provided by gardeners to others include:

- Exchanging information and demonstrating how to garden and/or use manure; and
- Giving or exchanging seeds, trees or flowers and/or manure.

The most frequent assistance activity cited was showing others how to garden. The second highest ranking gardener's assistance activity was giving seeds, followed closely by giving trees or flowers to others and exchanging information.

Most of those with previous experience did not seek assistance, while some of those with previous experience did. Some gardeners said that they had neither had previous experience nor sought the advice or assistance of others, while only 14% of all the gardeners both had experience and sought advice.

**Table 6.8: Relationship Between Previous Experience and Seeking Advice**

<i>Previous experience &amp; seeking assistance/advice</i>	<b>Do seek advice</b>	<b>Do not seek advice</b>	<b>TOTAL</b>
Previous experience in gardening	6	17	23
No previous experience in gardening	11	8	19
<b>TOTAL</b>	17	25	42

Most of the gardeners who offered assistance to others had no previous experience of gardening, while just over half of those with previous experience offered their assistance to others. The majority of gardeners did, therefore, offer assistance, with only 31% abstaining from such activities.

**Table 6.9: Relationship Between Previous Experience and Assisting Others**

	Do give advice	Do not give advice	TOTAL
Previous experience in gardening	12	11	23
No previous experience in gardening	17	2	19
<b>TOTAL</b>	29	13	42

### 6.2.5 Expenditure on vegetables

The overall weekly expenditure on vegetables, including all outliers (values that are extreme), for non-gardening households was approximately R32, while for gardening households this figure dropped to R19. However, the figure for weekly expenditure of non-gardening households purchasing vegetables is slightly skewed by several unusually high values, and when these are excluded, the figure drops to R27.<sup>91</sup> Nevertheless, it is still the case that families engaged in home vegetable gardening tend to spend less on vegetables than non-gardening families. This is often because they are more aware of vegetables and where to source them cheaply.

*'I get them [my vegetables] from the Terminus because its cheaper than the local spazas – that would cost me about R30' (Nyanga resident)*

**Table 6.10: Expenditure on Vegetables**

<b>Non-gardener's weekly expenditure on vegetables (with outliers)</b>	
Overall average (Primary data ave)	<b>31.34</b>
<b>Non-gardener's weekly expenditure on vegetables (without outliers)</b>	
Overall average (Primary data ave)	<b>27.48</b>
<b>Gardeners' weekly expenditure on vegetables</b>	
Overall average (Primary data ave)	<b>18.6</b>

### 6.2.6 Establishment of gardens

On average, the residents who have stayed in Cape Town the longest were those living in Langa (average of 38 years), followed by residents of Nyanga and finally those living in Khayelitsha (18 years average).

Most respondents had lived in their existing homes for 12 years, with a range of averages from 9 years (for residents of Khayelitsha) to 22 years (for residents in Langa). The time taken to establish a garden, as measured from the time that the current inhabitants of the home moved in, ranged from immediately to a very long time (having established the gardens in the last year or two despite living in the home for more than 10 years). Overall, most gardens were established after the family had lived on the premises for more than 2 years, although 29% were established in the same year as the family acquired the property. 21% of gardens were established after one to two years of living in the home. No correlation between establishing gardens and household size was noted but gardens were established mostly by the

<sup>91</sup> This could be the result of a number of factors, including respondents' lack of involvement in the household's financial management or, alternatively, a correlation between vegetable growing and awareness of the cost of produce.



unemployed. These, however, were not the poorest wealth group who seemed unable to access the necessary resources to garden.

**Table 6.11: Time Taken to Establish a Garden**

	<b>Langa</b>	<b>Nyanga</b>	<b>Khayelitsha</b>	<b>TOTAL</b>
Same year	5	3	4	12
After 1-2 years	0	4	5	9
After more than 2 year	4	5	6	15
Future*	0	3	0	3
Don't know	0	3	0	3

\*This indicates those respondents who had previously had, or who planned to have, a garden (even though this was not evident from the plot).

Steps taken during the establishment of a garden were normally described in terms of soil preparation. This included loosening the soil and sometimes removing stones, adding manure and/or compost, and then planting. Some respondents added that they would water the patch to be cultivated prior to preparing the soil (presumably to make digging easier), while only a few (one or two respondents) mentioned measuring the garden layout, leveling the area to be planted, using specialised bed preparation (such as laying newspapers down before preparing a raised bed) or watering subsequent to planting. Examples of two garden layouts relative to household utilisation of space are illustrated in Figures 6.4a and 6.4b



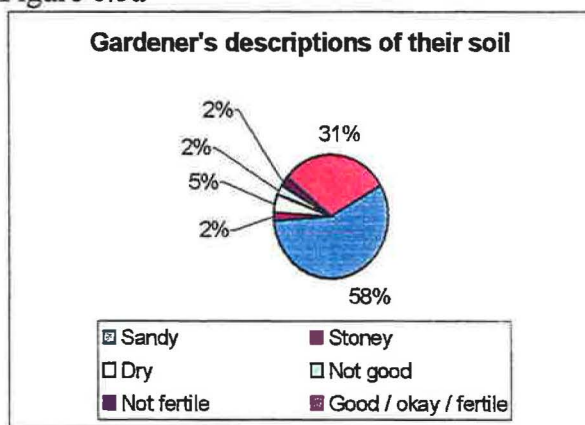
### 6.2.7 Soil

The most common opinion expressed about the soil by gardeners was that it is very sandy, although this applies less in Langa, where only 12% of gardeners indicated that sandy soils were a problem, as opposed to 61% in Nyanga and 53% in Khayelitsha.<sup>92</sup> A total of 13 respondents (31% of households with gardens) perceived the soil in their gardens to be unproblematic.<sup>93</sup>

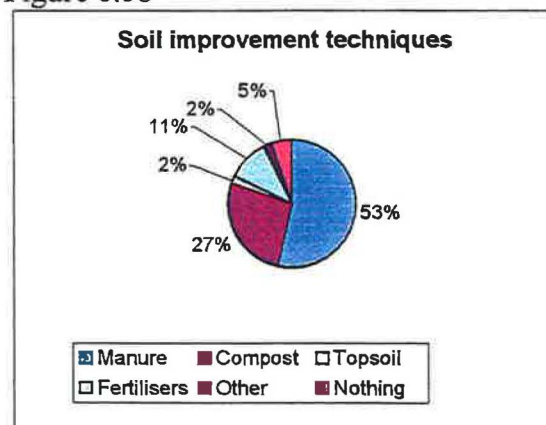
**Table 6.12: Description of Soil**

	Sandy	Good	% responses=sandy	% responses=good
Langa	5	3	12%	33%
Nyanga	11	4	61%	22%
Khayelitsha	8	6	53%	40%
<b>TOTAL</b>	24	13		

**Figure 6.5a**



**Figure 6.5b**



The most favoured method for improvement of the soil, cited by the gardening households, was the application of manure (53%). Less than a third of the gardeners stated that they use compost in their gardens (27%), while 11% used or would like to use fertilisers. Two of the more unusual additions made by gardeners to the soil include adding the hooves of sheep or beer *intsipho* (the by-product of traditional beer-making). See below (see section 6.2.10) for a discussion of the sources of soil improvers. Instances of chemical fertilisers being used by the home gardeners were rare.

Most respondents felt that when the soil is good it produces a good crop, and when there is a problem with the soil, seeds do not grow as well as they should. However, few residents stated what indicators they would look for to judge the quality of the soil. One woman said that loamy soil is best, and another used a comparison to fertile soil that she knew from elsewhere: *'In Umtata the soil is dark and we didn't need manure. Here, we need a lot of manure to fertilise.'* (Nyanga resident).

<sup>92</sup> Observation also suggests that the soil in Langa gardens is less sandy than elsewhere on the Cape Flats, being darker in colour and less rough in texture than the soil in Khayelitsha and Nyanga.

<sup>93</sup> This refers to the use of adjectives such as 'fertile', 'okay' and 'good' to describe the soil.



### 6.2.8 Water

All of the gardeners had access to water from a tap located on their property. In addition, each gardening household also had a hosepipe. This was the primary means by which the majority of gardens were watered. Two individuals indicated another means of watering. The first said that she sometimes uses a bucket for watering, as well as her hosepipe. The second used a watering can to water her seedlings.

Thirty-eight of the forty-two gardening households did not use wastewater on their vegetable beds (i.e. 91%). Four gardeners, two from Nyanga and two from Khayelitsha, stated that they did re-use grey-water, but only that which came from the kitchen and did not have soap in it (although water with washing up liquid was also re-used). Interest was expressed by one individual to learn how to re-use grey-water.

For most of the gardeners, the main reason for not recycling greywater was because they perceive water containing impurities, whether organic or inorganic, as dangerous to their plants. In total, some 85% of gardening households perceived grey-water as dangerous, although only 5% made a direct link between the grey-water and the effect it could have on human beings. The majority were concerned about the danger that it is perceived to hold for their produce (70%).

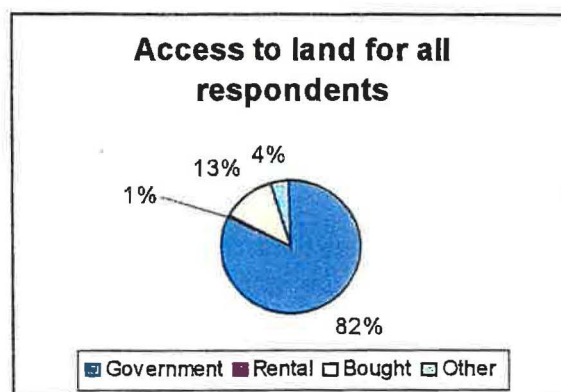
Figure 6.6



### 6.2.9 Access to land

The majority of households interviewed indicated that their plots were obtained from the government (87% of non-gardening households and 74% of gardening households). Only 1% of non-gardening households rented their homes, and no households with gardens rented their homes. A few of the respondents lived in homes that had been purchased from previous homeowners (8% without gardens, 21% with gardens). Two respondents stated that they obtained their homes through a housing project, but it can probably be assumed that their plots would nevertheless have been obtained through the same local government or municipality referred by the majority of respondents. One gardener did not have an on-plot garden, but did cultivate vegetables at a nearby clinic where he worked as the caretaker.

Figure 6.7



43% of gardeners indicated that they are engaged in off-plot cultivation activities. Most of these were in Khayelitsha, where more than 50% of gardeners are involved in local gardening projects, the two main projects cited were being the Siyazama Community Allotment Garden (SCAGA) and the Manyano Women's Group garden at Chuma Primary School (see Case



Studies 4 and 6 respectively).<sup>94</sup> In Nyanga, access to land for gardening activities included the Quaker Peace Centre and a local clinic (both of which have explicitly set aside land for vegetable gardening, although activity at QPC is far more pronounced than at the clinic). Two respondents said that they gardened outside of the townships.

**Table 6.13: Places of off-plot Cultivation**

Places of cultivation	TSOGA	Quaker Peace Centre	Clinic	School	SCAGA	Other	TOTAL
Langa	3	0	0	1	0	0	4
Nyanga	0	2	1	0	0	2	5
Khayelitsha	0	0	0	2	5	2	9

#### **6.2.10 Access to other resources: seeds, soil improvers, tools/equipment**

91% of gardeners obtained seeds from shops or markets, and 29% obtained seeds from NGOs or donors. Just under 10% said that they make their own seed, and two respondents (<5%) stated that seeds are brought back from the Transkei for planting in their garden. Friends, family or neighbours also provide approximately 12% of the gardeners with seeds, either free of charge or in exchange for other seeds, cutting or plants.

Among the NGOs identified as supplying seeds, Abalimi Bezekhaya and Quaker Peace were the most prominent. There was, however, one instance in which a project supported by LDU, and started at the same time as the Masizakhe Garden (see Case Study 1), was a source of seeds for a nearby resident.<sup>95</sup> One Nyanga resident bought seeds from a golf course where his brother works. Another Nyanga resident obtained much of her non-vegetable garden material (including flowers, shrubs and small trees) when travelling to and from her work place. She would scour the streets for plants that were left on pavements for waste collection, and would collect these to take home. Sometimes, potatoes that are commercially sold in large pockets, and which have begun to sprout already, are used in vegetable gardens, although the success rate of these untreated potatoes would appear to be lower than for treated potatoes.

The most prominent source of soil improvers was NGOs,. The percentage of gardeners who rely on shops or markets and friends or family and neighbours was 23% and 22% respectively. Use of organic waste from the kitchen was often cited as a source of organic matter for decomposition. One woman believed that if she threw potato peels in the ground that she would grow more potatoes, but other organic waste, such as cabbage leaves, she simply threw away. Another respondent made a point of emphasising that the success of her backyard vegetable garden depended almost entirely on her use of vegetable scraps, which she placed in a large pit and left covered for a few months before mixing it with soil and planting. This woman also used *intsipho*, a waste produce of traditional beer-brewing, in preparing her garden. One Nyanga resident indicated that she uses manure obtained from a

<sup>94</sup> This is not surprising, given the route taken on the Khayelitsha transect walk (See Figure 6.1a). In each of the areas where transect walks were conducted, a portion of the gardening households had access to land at the places already discussed in five of the case studies (see section5).

<sup>95</sup> It is interesting to note the transfer of resources that this project is having in to the community. (The project, referred to in section 4.2.3, is located on the grounds of a clinic of the Red Cross Society, in Terminus Rd, Nyanga)

‘manure run’ (i.e. a vehicle which travels through the neighbourhood selling manure to the community).<sup>96</sup>

Most gardeners interviewed obtain their tools from shops or market places. Friends, family or neighbours is the next most frequent source of tools and equipment (with gardeners either borrowing them temporarily or retaining them on a permanent basis). Of the two gardeners who said that they did not have tools or equipment, the one said that she uses an eating fork to prepare her beds for planting, while the other simply uses her hands.

#### **6.2.11 Crops**

Potatoes, cabbage, spinach, tomatoes, onions, mielies and carrots were among the most popular vegetables, both in terms of the frequency with which gardeners indicated that they were grown and in terms of respondents’ most favourite crops. (See Figures I-IV below). Potatoes were grown by 75% of gardeners, while cabbages, spinach and tomatoes were each grown by around 64% of households. Beetroot, beans, pumpkin and peas were also among the top ten most frequently grown vegetables, followed closely by green peppers. Among the less frequently grown items are turnip (10%), butternut and cauliflower (7%), and eggplant (5%). Overall, brocolli, herbs, lettuce, tobacco, garlic and grapes were each cited only once.

Although they are not vegetable crops, references to flowers, trees and/or shrubs were also documented. In this regard it is interesting to note that flowers were ranked fifth in the overall analysis of preferences for what is to be grown in gardens, and sixth among the most frequently grown plants. Trees were also mentioned, although less frequently. Ranked seventh, together with beetroot, as the overall favourite plants to grow, trees were grown by approximately 10% of gardeners.<sup>97</sup>

After potatoes, the next most favoured crops were spinach and cabbage (favoured by 43% and 38% of households with gardens respectively). These were followed in equal proportions by carrots, mielies and tomatoes (each mentioned 11 times, i.e. 26% of responses). Onions were ranked joint fifth (shared with flowers), followed by pumpkin, beetroot (sharing seventh place with trees) and beans (favoured by only 7%). Butternut, peas and green pepper were among the lesser favoured crops to grow, as they were enjoyed by one or two respondents.

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<sup>96</sup> It is unclear who is responsible for the manure run. A few years ago, Abalimi Bezekhaya also did a manure run through the townships, but this support activity was stopped when the vehicle used for the run was hi-jacked.

<sup>97</sup> This figure is based on the frequency of responses. However, it should be noted that there were significantly more than just four households that had some form of vegetation, whether trees or shrubs, growing on the property. This figure could, therefore, be taken to be an indication of the relative importance which gardeners attach to the trees grown in their yards and/or the effort expended in planting and tending trees/shrubs.

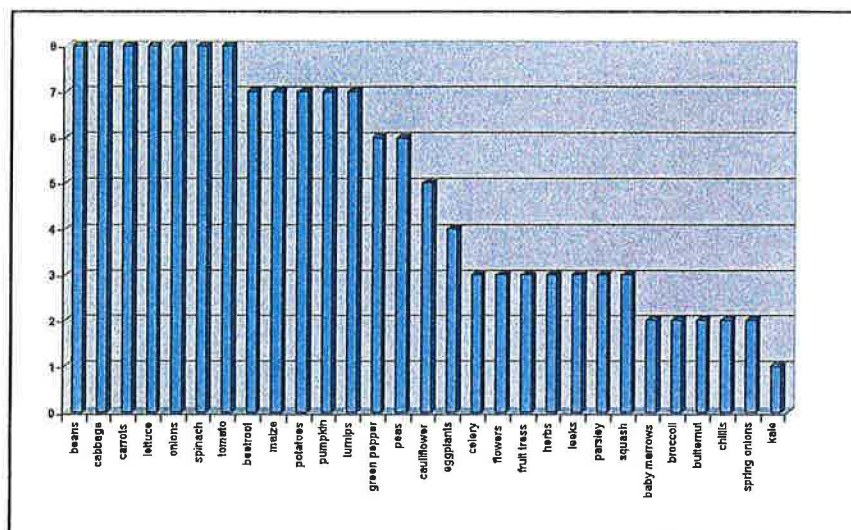


Figure I: Crops most commonly grown by case study gardening groups

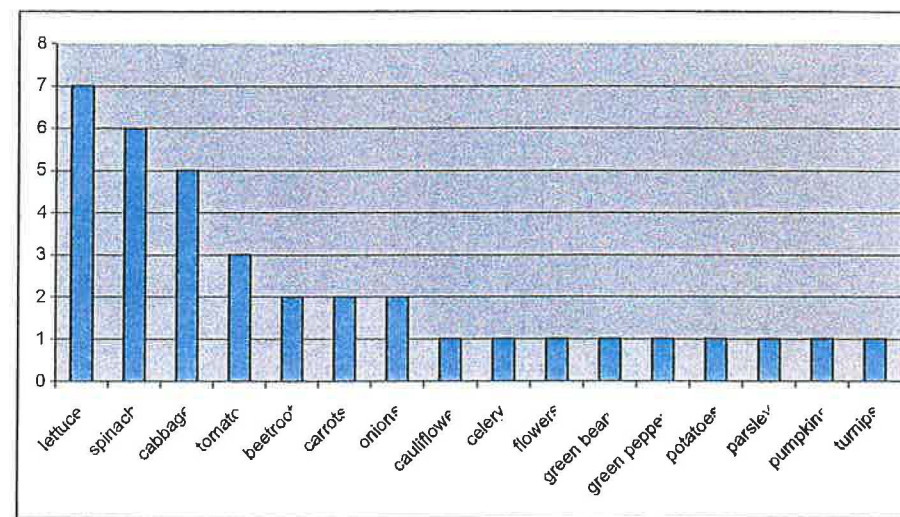


Figure II: Crops frequently grown among gardening groups

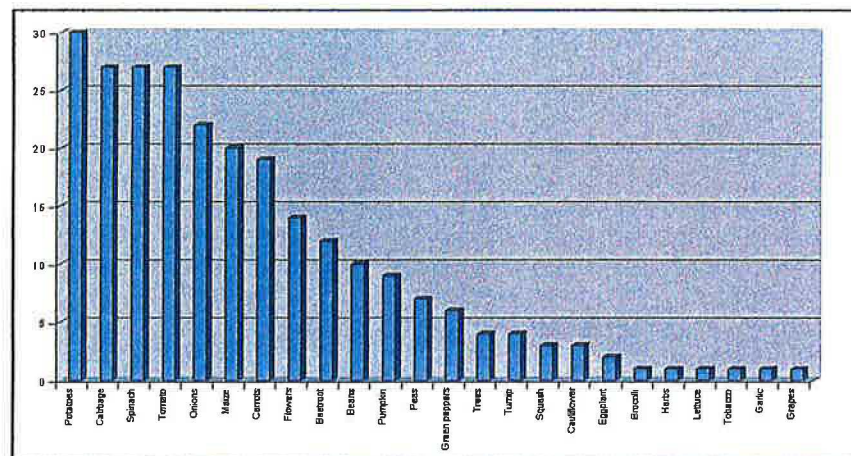


Figure III: Crops most commonly grown by home gardeners

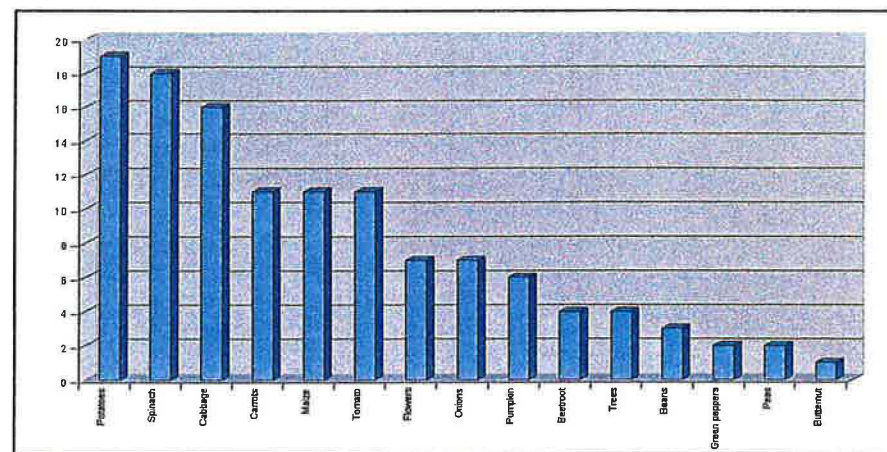


Figure IV: Crops favoured by home gardeners



### 6.2.12 Preferred seasons for planting

Overall, most gardens were cultivated in both summer and winter (62%). In terms of preferences for a single season of planting, summer was marginally preferred over winter, with 21% preferring to grow outside of the winter rainfall months while 17% preferred winter, mostly because of the plentiful rain and the need to avoid the sun burning the leaves of their crops.

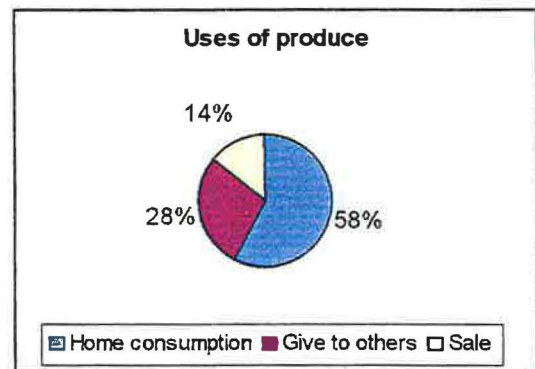
### 6.14: Planting seasons

Seasons for planting	Nyanga	Langa	Khayelitsha	TOTAL
Summer	4	3	2	9
Winter	2	2	3	7
Both	3	13	10	26
<b>TOTAL</b>	<b>9</b>	<b>18</b>	<b>15</b>	<b>42</b>

### 6.2.13 Use of produce

Home consumption of items grown on the property is not limited to food production. For instance, one woman who had Angelica growing on the property indicated that she uses the plant for soothing aching feet. ble uses for crops grown included sale, consumption and giving of produce to others. The most frequent use of produce grown was consumption in the home. 48% of households shared the fruit of their labour with others, especially neighbours, while 14% sold the crops.

Figure 6.8

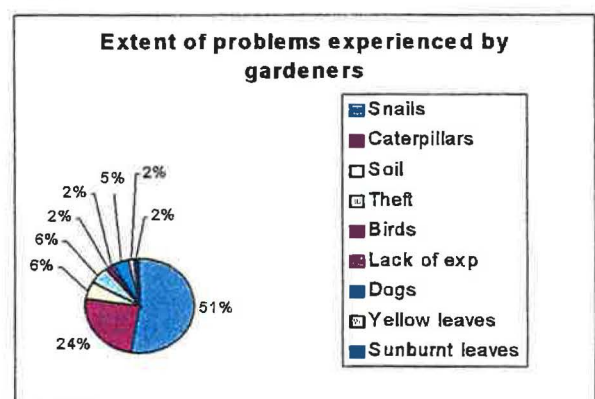


Among those who sold their crops to others, the primary motivation was in order to obtain money. One respondent elaborated that the money earned assists with paying the children's school fees. In most cases, those purchasing the produce were neighbours and/or the surrounding community, although 3 individuals stated that the produce is sold at a shop/market. The most frequently sold crops were spinach and carrots (constituting 43% of all sales mentioned), followed by onions (14% of sales). Potatoes, cabbages, beetroot and tomatoes are also sold occasionally. Some gardeners sold anything and/or everything, depending on what they had available. Others noted specific crops, and said that they sold these when they had a surplus.

### 6.2.14 Problems experienced

The most frequently cited problem experienced by gardeners was that of pests. 51% of respondents considered snails a problem, while caterpillars were mentioned by 24% of those interviewed 6% had problems with the soil in their gardens (including both infertility and the sandiness of soil resulting in wind erosion) and the same proportion mentioned theft as a problem area. Dogs venturing into gardens and destroying produce was another, but less frequently cited, problem. Yellowed or sunburnt leaves, lack of

Figure 6.9





experience and birds were each mentioned by a small percentage of gardeners.

#### **6.2.15 Attitudes of the local community and family members towards gardening**

The majority of gardening households surveyed (74%) believed the attitudes of the local community to be positive. 24% felt that they either could not comment on the local community's attitude or that this attitude was neutral. A small proportion (2%) had received negative responses from the surrounding neighbourhood. These negative reactions were not usually aggressive as such. The most common negative response documented was that gardeners are wasting their time trying to grow crops in the harsh environment of the Cape Flats.

One gardener, who offers passers-by the opportunity to take photos in his well grassed garden for a small fee (R20), expressed the satisfaction that he derives from their positive comments: *'They are saying its looking fantastic. They love it. They say I'm good in the garden'*. Other positive responses from gardener's families are implicit in respondent's comments such as: *'My family encourages me to do gardening. All my family are included in the gardening. We always discuss about the garden'* (Langa resident). By contrast, one example of negative reactions from others is evident in a Khayelitsha woman's perspective: *'The neighbours think that garden is a waste of time'*, while another had experienced a mixed response: *'The neighbours don't think much of it'*, she said, *'but they take the veg from here anyway'*.

#### **6.2.16 Links to / the influence of / attraction to gardening groups**

Almost all of those with home gardens (86%) were aware of gardening projects in their neighbourhood. The distribution pattern of home gardeners, relative to gardening projects varied in each of the townships. In Langa, the frequency of gardens increased with distance from the garden centre, while in Nyanga most of the gardeners interviewed were within close proximity of a garden project (however this is also almost certainly a function of the transect route, which went from one garden project to another). The distribution pattern in Khayelitsha saw an equal number of home gardeners close to and far away from grup project gardens, with fewer at a medium distance. However, data from this study is merely suggestive of the link between proximity to premises of group gardens and the extent of home gardening in the surrounding area, and conclusive evidence of such a link would require further investigation. Indeed, there may be other explanations, such as that the frequency of home gardening in an area prompts groups to form.

In terms of awareness of group projects, the findings of this study suggest that those living closer to areas in which gardening group projects are located are more likely to be aware of the groups' existence and activities than those living at a distance from the gardens, although this is a generalisation and it did not always apply. It may be that exposure to group activities on the collective garden plots sensitises residents to the potential of group gardening and could even play a role in promoting home gardening activities. However, further research is required to substantiate such a supposition.

Just over 73% of those with home gardens indicated that they would like to join a gardening group. The greatest interest came from Khayelitsha residents (80%), followed closely by gardeners surveyed in Nyanga (77%). Only 55% of the Langa gardeners interviewed expressed any interest in joining a group. One Langa resident

even expressed the view that such garden projects '*can't help the community*,' an opinion not voiced by any other respondent.

The primary and most common reason given by gardeners for why they would like to join a gardening group was in order to learn more about gardening. The next most motivating factor was for the enjoyment of gardening. Reasons that were less frequently cited include having more vegetables, exchanging knowledge, helping others, and gaining access to land. As one resident from Nyanga stated: '*The gardens at QPC are so good because they are rich, richer than my garden. My garden is weak. If I could have more land it would be better*' (Nyanga resident). Another resident, in Khayelitsha, was keen to own a bigger garden than he already had, and even to join a gardening group to do so, but said that his time was restricted because he is always busy looking for a job.

#### **6.2.17 Plans for the future**

31% of gardeners said that their future plans were to continue gardening, while 24% indicated that they would like to expand their existing activities. Also of high priority was planting more plants and/or increasing the variety of plants grown in the garden (19%). Other agriculture-related aspirations cited included selling vegetables, moving to rural areas in order to farm, learning more and/or teaching others, and increasing the security of gardens (e.g. by fencing the plot to keep out dogs and cars etc.). 7% of responses from gardeners viz a viz future plans related to doing other activities in order to obtain financial rewards.

It may be that to some gardeners the continuance of gardening activities is an assumption that goes without saying, and is not considered a "plan". However, that 31% deemed such intentions significant enough to mention is an interesting observation and may be interpreted as an indication of the level to which gardeners feel they must persevere to maintain their gardens.

In terms of access to land, one resident, who was also a gardener at Chuma Primary School (see Case Study 6) had short- and long-term future plans: '*I want to save my money*' said one man '*and if I will have more land, I will sell veg to the people*'. Similar aspirations to obtain more land were voiced by residents from Langa: '*If I will get enough space I will want to plant more and I want to help other people*', '*...I will make a big garden and I will sell that veg to the state*'.

### **6.3 Discussion of Findings from Transect Walk Surveys**

The above analysis of the transect walks conducted in Langa, Nyanga and Khayelitsha, during January 2000, shows that significant gardening activity does occur in these townships, although the type of gardening that occurs, and the motivations for gardening, may vary. The implications of the above results are discussed below with reference to the socio-economic variables associated with gardening at the household level and the relationship between home gardening activities and gardening groups and/or projects.

#### **6.3.1 Factors influencing home gardening**

Among the indicators having the most significance with regard to gardening behaviour are those relating to social and economic status. This study has found that most urban agriculturists in the Cape Flats townships are gardeners originating from

rural areas, who have come to the city to look for work but who are currently unemployed or informally employed as casual labour. Most gardeners have, therefore, had some exposure to farming and/or gardening in other parts of the country (notably the Transkei and Ciskei regions of the Eastern Cape). Most are middle aged, with a primary school education and are either single or married. The results of the transect walks have also mirrored those of the Case Studies (see Section 5) with regard to the gender of gardeners, since in both cases it was most frequently the women who undertook gardening activities, particularly those aimed at ensuring household food security. The notion that gender of the household head correlates to the priority given to vegetable gardening was also confirmed by the findings which saw a slight increase in gardening activity among female-headed households. Nevertheless, while the results confirm that it is usually women who undertake gardening activities, the proportion of male gardeners in this sample was substantial enough to suggest that the role of men in gardening, particularly in ornamental gardening, should not be undermined.

Lack of employment and previous experience would both appear to be facilitative factors for gardening, and although employment and gardening activity are not mutually exclusive, it would appear that those with permanent jobs are less likely to garden, mainly because of a limited amount of time and energy available for gardening. However the poorest of the poor did not garden although size of household was not seen to influence gardening in this survey. Previous experience in gardening seems to be associated with a tendency not to actively seek advice from others. Nevertheless, most gardeners want to improve their gardening skills, and many rely on NGOs for other services such as provision of seeds and soil improvers. Thus it would seem that there is a market for NGOs interested in promoting gardening activities to provide advice and/or skills training to township agriculturists who try to apply techniques learnt previously, and elsewhere, to the circumstances found on the Cape Flats.

Access to land is an important pre-requisite for urban agriculture and limited access to land is one of the most crucial factors in the decision-making process facing Cape Flats township residents who want to have a garden. It would seem that the primary concern of most households wanting to establish a garden is where to grow crops in an environment that is both suitable and secure, but which at the same time will not result in opportunity costs being incurred, such as foregoing the use of such land for accommodation structures that could be rented out to others and thereby generate income. Not surprisingly, households that were in less permanent accommodation (whether because they were squatting on the land or renting from others) were found to be relatively unmotivated to establish a garden, and a similar finding pertained to those families whose homes were under construction.

Similarly, there is a correlation between the socio-economic status of a township and attempts to recycle water. Initiatives to recycle or reuse greywater are rare and only found in the case of the newer (i.e. less established and more informal) areas within the townships of Nyanga and Khayelitsha where socio-economic status is lower compared to those of communities living in the well-established, older areas of Langa.

There also appears to be a correlation between the length of stay in a particular township and the length of time taken to establish a garden. In Langa, households with a garden reported having established the garden almost immediately after taking

occupation of the house, while most Khayelitsha gardeners only established gardens after two years or more. This pattern could be the consequence of a number of interrelated factors including the quality of housing, expected length of stay in the home and/or the nature of the resident's access to land. For instance, zinc housing is less permanent and less conducive to making an investment in a garden. Thus, in areas where there are plans to build new brick houses (such as was often the case in parts of Khayelitsha) there is little reason to make the necessary long-term investments in soil improvement or cropping cycles. The disincentive to garden may also be further exacerbated if the resident is merely renting the premises on a short term basis. Whatever the reasons, it is evident from the findings that most gardeners see their gardens as an investment of time, energy and resources which they would prefer to invest when there is a degree of permanency associated with their accommodation. This does not, however, imply that once permanent structures are erected that urban agriculture activities are guaranteed to be established, because the increased social status associated with permanent housing may function as a disincentive to continue subsistence gardening.

The nature of the relationship between home gardening and garden projects was not conclusively determined although certain patterns do appear to exist. For instance, it would appear that proximity to gardening projects increases awareness about the activity of gardening, and the potential for undertaking gardening activities as a group. Proximity to gardening projects also increases the level of desire to have a garden at home, and/or see the group garden as a resource or support base for home gardeners. In this survey, six of the home gardeners interviewed were also members of group gardening projects. Their involvement in home gardening appears to have been both supported by and catalysed their involvement in group gardening activities. However, the results are tentative in this regard, since very few residents interviewed were both home gardeners and part of a gardening group.



## 7. DISCUSSION

This report has addressed some of the issues related to the complex social and institutional aspects of urban agriculture. The overall findings are discussed here with reference to the following topics:

- Patterns of participation in urban agriculture among Cape Flats residents;
- The benefits and constraints of urban agriculture in the context of the Cape Flats;
- The nature of farming systems employed by urban agriculturists on the Cape Flats; and
- Perceptions of the value of urban agriculture among resident of the Cape Flats, and government (represented mainly by urban planners and policy-makers).

### 7.1.1 Patterns of participation in urban agriculture

The question of who participates in vegetable gardening on the Cape Flats is not easy to answer and research in the area is difficult. For instance, there is no single directory or database that may be consulted when contacting urban agriculturists in Cape Flats townships. Nevertheless, some good findings have resulted from this survey and when comparing the results of the study with those of other researchers, several trends emerge. Of the gardeners who were included in this research, the majority was found to be female adults<sup>98</sup>. There are, however, exceptions to this, as was illustrated in the case of the garden at Acacia Primary School, Parkwood.<sup>99</sup> In terms of power and decision-making, the gender of the household head may have a significant influence on gardening activity. In this study, the number of female-headed households represented in gardening groups was high (only one or two of the women in each group lived in male-headed homes)<sup>100</sup>. The ratio of male to female heads saw approximately twice as many male heads as females in non-gardening households, while in gardening households the gender of household heads was closer to a 50:50 split. Unemployment is another common characteristic often associated with urban farming. This study found higher levels of unemployment among gardening families, with figures comparable to those of other research<sup>101</sup>.

For the most part, the gardeners surveyed during this research were over 40 years old<sup>102</sup>. However, there were nuances. Whilst an adult may claim to be the gardener

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<sup>98</sup> This is a common finding (Beaumont, 1991; EAU, 1994; Rogerson in Karaan *et al.*, 1996; LDU, 1994; Fermont, 1998).

<sup>99</sup> This garden was located in one of the so-called coloured areas of Cape Town, and it may be that observations by de Necker *et al.* (cited in Mohamed, 1999) have some relevance. These researchers note that the 'responsibility for urban and peri-urban agriculture falls largely with males in 'coloured' and females in 'black' communities. (Mohamed, 1999: p. 5). Another example of male-dominance in urban agriculture is cited in a study conducted in 1994 by the LDU which found that it was usually the elderly, unemployed males who were responsible for gardens in the township of Langa (LDU, 1994).

<sup>100</sup> May (in Thorgren, 1998: 9) found that most gardening households were female-headed households. Other studies suggest that although women are the primary gardeners, they nevertheless consult with their husbands prior to commencing gardening activities (Karaan & Mohamed, 1996).

<sup>101</sup> The LDU study, for instance, found that in Crossroads 60% of adults in households with gardens did not have formal employment. The figures in Beaumont's study of gardening patterns in Town 2, Khayelitsha were slightly higher, at 87.5%. In both this study and that of the LDU, the rates of unemployment were higher in gardening households

<sup>102</sup> This figure is similar to those of other studies (e.g. the LDU, 1994 found the mean age of the adults in gardening households surveyed to be 43.2 years of age and Fermont *et al.* state that most gardeners are within the economically active age group)

several households appeared to rely on the younger generation to supply some labour and/or resources for gardening. Moreover, in the first case study (Masizakhe Gardening Group) it is the youth that represent the greatest proportion of members. With respect to the proportion of households who participate in vegetable gardening, the figure of 35% arrived at in this study lies within the range of those from previous studies which have found the figure to lie between 25% and 43% of households in peri-urban or urban fringe areas<sup>103</sup>.

This survey suggests an ambiguous relationship between previous experience and other factors that could influence the success of urban agriculture. This is particularly the case with respect to seeking advice or assistance from others. Given the difficult environmental conditions of the Cape Flats, the fact that gardeners often did not seek advice could be detrimental to the promotion and sustainability of urban agriculture in Cape Town. This becomes even more problematic in cases where previous experience has been gathered in vastly different, probably more conducive/productive, environmental conditions. Other researchers have largely neglected identifying sources of experience used by gardeners. This study found that own experience and family or friends are the two most important sources of skills training for home gardeners.<sup>104</sup> However, 16% also cited training by NGOs as a source of knowledge and among gardening groups NGOs were a highly important source of expertise, providing all members with access to skills training.

The use of socio-economic indicators to classify the various participants in vegetable production has previously been linked to the nature of the motivations underlying their actions. For instance, Byerley (in Thorgren, 1998:11) defines two social groups that are most likely to participate in urban agriculture. According to Byerley, the lowest socio-economic urban groups undertake vegetable gardening out of absolute need as a survival strategy, while other, more fortunate urban farming practitioners are primarily concerned with maintaining current standards of living, and minimizing vulnerability to a breakdown in formal food supplies.<sup>105</sup> The next section takes a closer look at the factors that motivate urban farmers in the context of the Cape Flats.

### **7.1.2 Factors that influence levels of participation in urban agriculture**

The results of the surveys and case studies of gardening groups conducted in 1999/2000 revealed a number of factors which may influence the level to which urban township dwellers are involved in soil-based urban agriculture activities. Many of the factors are corroborated by the findings of previous research. In many instances, the factors that motivate participation in urban agriculture and are therefore “enabling”, are related to the perceived and/or tangible benefits of urban agriculture, while those

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<sup>103</sup> Cross *et al.*, cited in Thorgren, 1998, Beaumont, 1991.

<sup>104</sup> This finding supports LDUs 1994 survey.

<sup>105</sup> In terms of socio-economic status of gardening households, it has been found that levels of poverty are generally quite high. Fermont *et al.* for instance, found that 25% of their “gardening” sample were ‘the poorest of the poor’ while a further 25% were living at the Household Subsistence Level. This study did not undertake an extensive examination of family income figures. A comparison of rooms per house to number of members in the household was taken as a tentative socio-economic indicator, but the results were not very conclusive, since the ratio of household members to rooms was almost unvaried between the different groups and townships (in the range of 1.4 people per room to 1.2 people per room). The LDU study found that households with large families (and hence an assumed lower income per capita) were more likely to be found gardening. This study did not identify such a correlation.

that act as disincentives are those that pose constraints to urban agricultural production. The various influencing factors are discussed below with reference to:

- The benefits of urban agriculture as identified in the literature; and motivational factors cited by gardeners themselves; and
- Constraints and disincentives to participation in urban agriculture;

#### 7.1.2a) The Benefits of Urban Agriculture and Gardener's Motivations

A summary of the benefits that have been associated in the literature with participation in urban agriculture is provided in Box 7.1.

##### Box 7.1 Benefits of Urban Agriculture

- Improved social and technical skills
- Contribution to quality of life
- Empowerment
- Increased social interaction
- Improved community cohesion
- Catalyst for community development
- Decreased poverty levels
- Job-opportunities
- Improved diet and health
- Improved environmental conditions; and
- Increased environmental awareness

Sources: Eberhard (1989); Beaumont (1994); Katzchner (1995); Byerley in Thorgren, Fermont *et al* (1999)

This study has found that the major factors motivating urban agriculture and gardening activities in the Cape Flats townships are social and aesthetic, with economics also playing an important role.<sup>106</sup> Indeed, in identifying the primary motivating factor for wanting a garden, interest and enjoyment ranked even higher than consumption of crops or saving of money.<sup>107</sup> Other motivations cited by gardeners included the utilisation of resources available. In many cases these resources were intangible, such as previous experience or time i.e. the absorption of unemployed labour<sup>108</sup>. Saving on household food expenditure, and generating income through sales of surplus produce were also found to be motivations in this study. The reasons for this are not clear, but it may be that, as with the motivation of food security (which was directly mentioned by only one of the gardening groups), such motivating factors are assumed to be obvious to the researcher and hence not worth mentioning.

<sup>106</sup> Much of the research about the benefits of food gardening in Cape Town suggests that the economic benefits are less significant than the social benefits associated with food gardening, both at home and in the group (Eberhard, 1989; Beaumont, 1994).

<sup>107</sup> The significant value of urban agriculture as a recreational activity has been dealt with in other research (e.g. Eberhard, 1989) and the sense of well being and pleasure derived from gardening was also found to be highly significant in motivating gardening activity in other studies (Beaumont, 1994; Katzchner, 1995).

<sup>108</sup> Also found to be significant by Karaan & Mohamed (1996:46).

Whilst some researchers<sup>109</sup> state that socialization is an important motivation for gardeners this was not a motivating factor that was directly identified by gardeners themselves in this survey. However there is evidence that social links among members in gardening groups are strengthened and/or forged during gardening related activities. Moreover, another key motivating factor, particularly among gardening groups, was community development. While the link between urban agriculture and community development has not been conclusively established nor fully investigated by the research conducted on the Cape Flats to date, the observation has been made that gardening is seen as an 'entry point to other activities' (Fermont *et al.* 1998: 38) and 'a doorway to other opportunities' (Small, 1999).<sup>110</sup> This survey has provided strong evidence to support these observations.

In terms of economics, the surveys of households and members of gardening groups revealed that for many households economic motivations are significant in determining engagement in urban agriculture, particularly when seen in combination with the social benefits. This study shows that gardening helps households to save on the household's food budget. The household surveys found lower levels of weekly household expenditure on food among gardening families. However, it should be noted that there are usually also several input costs incurred by the family that produces its own food (e.g. the cost of seeds, manure, opportunity costs of labour etc). The costs incurred by the individual, the household or the supporting NGO may even translate into one of the biggest constraints facing the promotion and further development of urban agriculture.

#### 7.1.2.b) Constraints to urban agriculture and disincentives for non-gardening families

The constraints associated with urban agriculture on the Cape Flats are numerous. Among the most significant are lack of access to resources and markets, high opportunity and start-up costs and agricultural problems such as pests, poor soils and harsh climatic conditions. Box 7.2 provides a list of the constraints on urban agriculture in Cape Town.

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<sup>109</sup> Thorgren, 1998 for example.

<sup>110</sup> See Abalimi Bezekhaya and the Cape Flats Tree Project, Newsletter no.22, Autumn & Winter 1999:



#### Box 7.2 Constraints associated with urban agriculture

- Lack of access to land and/or small plot size
- Lack of access to other inputs such as water and compost
- Opportunity costs and/or alternative livelihood strategies
- High expectations and disappointment/discouragement with poor results
- The lack of a gardening tradition and apathy combined with an emphasis in today's society on the "modern individual"
- Low yields and the high cost of inputs
- Cash flow problems
- Low levels of organisation and disruptive social dynamics within gardening groups
- Lack of skills and/or lack of suitable gardening knowledge
- Theft
- Collective gardening arrangements
- Poor soils, especially in terms of fertility and waterlogging
- Wind
- Lack of accessible markets

Sources: Eberhard (1989); Beaumont (1994); LDU (1994); Katzchner (1995); Thorgren (1998); Fermont *et al* (1999); Small (1999)

The most pressing problem which appears to be facing urban agriculturists in Cape Town at present is access to land for cultivation. Most of the gardening groups in this study sought solutions to this problem by accessing vacant land through agreements with local community organisations and structures. In most cases such land was on the property of schools or churches. The location of the SCAGA garden on servitude land is more unique, but is being promoted as a suitable model for future urban agriculture by the supporting NGO (Small, pers. comm, 2000). In South Africa, as in other places in the world, access to land is inevitably a political issue, and additional factors compounding this constraint are further dealt with below (see section 7.1.4 b).

Aside from land, there are other aspects that constrain urban agriculture. The 1994 LDU study ranked 14 reasons why non-gardening families had not planted a garden. Highest ranking was a lack of cash for inputs and poor access to resources, followed by the lack of suitable fencing. Insufficient space was only third on the list of disincentives<sup>111</sup>. Karaan & Mohamed's (1996) results were more similar to problems in this study. The results revealed that lack of sufficient space/land was the primary issue. This was followed by snails, theft, shortage of tools, the need for hedges around the garden, and wind. Other, less highly ranked problems, were stones in the soil, insufficient manure or fertilizers, worms, discoloration of spinach, insects, dogs and the sun. These problems are similar to the responses from gardeners interviewed during this research. This survey has also added conflicting land uses (e.g. area for child's play versus vegetable patch), problems of soil quality which gets easily waterlogged, and other pests such as the caterpillar of the cabbage white and birds. Pests were among the most frequently cited problem in this study and are further discussed with reference to the nature of urban farming systems (see below, section 7.1.3e below). Despite all of the above mentioned problems facing urban gardeners on the Cape Flats, it is interesting to note the words of Abalimi Bezekhaya's

<sup>111</sup> followed by lack of time, lack of adequate labour and problems with the soil. Other, less frequently cited constraints included preference for a flower garden than a vegetable garden, age (implying lower labour potential), alternative income opportunities and lack of gardening knowledge.

Director,: *'Lack of money, land or resources is entirely secondary to people's ability to conceive a vision and commit to it'* (Small, 1999).

### **7.1.3 Urban Farming Systems: The what, how and when of urban agriculture on the Cape Flats**

#### **a) Methods of Cultivation**

The methods of cultivation among urban agriculturists on the Cape Flats do not appear to vary widely from place to place. Differences in terms of cultivation appear to stem largely from sources of previous experience and/or knowledge. Most gardeners who have had input from NGOs utilize the raised or trenched bed methods for soil preparation promoted by the NGO in question. Some home gardeners apply principles similar to those underpinning these techniques, but it was seldom the case that the home gardeners who were not previously trained by an NGO employed these methods. These gardeners usually had very basic gardening skills, and simply dug the earth before planting, or applied other farming methods learnt in rural areas elsewhere in the country.<sup>112</sup>

With regard to soil improvement techniques, the most common soil improvers were organic; especially cattle and/or chicken manure and compost made from organic wastes, crop residues and leaf litter. Artificial fertilizer was very seldom encountered. These findings are similar to those of the LDU study (1994) during which the more unusual use of brewer's residue was also encountered. However, unlike the results of the LDU study, techniques such as intercropping and crop rotation were not widely practiced among gardeners interviewed for this study, but appeared to occur rather haphazardly, even in gardens where these techniques are being taught to the gardeners by the supporting NGOs. It seemed that many of the gardeners did not fully understand the reasoning behind such techniques.

#### **b) Crops**

The two most prominent crops featured in this study were spinach and cabbage. Spinach was the most popular of the crops, particularly among gardening groups. This popularity was primarily due to the high yields, although there are other enabling factors that probably contribute, such as sufficient water supplies for this relatively water-thirsty crop. It is also not perceived to be a disease-prone or pest-attractive crop, unlike cabbage, which was poorly rated because of vulnerability to attack from the caterpillars of the cabbage white butterfly. Cabbage is also slow to grow. Nevertheless, it is a popular vegetable among gardeners, partly because it is widely eaten in the townships and is a basic foodstuff in Xhosa and Sotho cultures.

The influence that cultural eating traditions have on crop selection is one of a number of factors that impact on the types of crops grown. Others include the gardeners' familiarity with the crop, the availability of the necessary inputs (this is often influenced, for instance, by the types of seeds and seedlings on offer from NGOs), variable yields and the marketability of the product. Among home gardeners, the latter was not usually based on empirical market research, but rather based on instinctive assumptions about the preferences in the local community, and other social knowledge such as ease of preparation for consumption. This in itself is an interesting finding, since it suggests that for the most part, the local community is the home

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<sup>112</sup> Indeed, there were instances where the soil preparation techniques were referred to as "ploughing".

gardener's market. In the case of gardening groups, marketing strategies were usually based on a combination of *ad hoc* sales to local community members and the assistance of the NGO to market produce outside the local community.

c) Seasons for growing various crops

Most gardeners indicated that they would like to be cropping all-year round, but many feel that certain times of the year are unsuitable. For some, the summer is too dry and hot; requiring extensive watering of crops which incurs greater water and labour costs. These gardeners prefer to grow crops in the winter, when rain provides sufficient water to keep the crops alive. Others prefer to grow crops in summer because they would rather avoid the cold, damp conditions of winter when mold develops. Several others have determined which crops to grow when and adjust their planting accordingly.

d) Water

Access to water did not appear to be a major issue among home gardeners, nor was it a serious problem for gardening groups, except in cases of interrupted supplies. However, disputes over payment for water *did* function to inhibit the activities of the Sinethemba Gardening Group (Case Study 3). Very few gardeners in this study considered recycling of greywater onto their gardens a viable option. Most were afraid of the danger associated with used water and many simply did not see any incentive in transporting grey water to the garden when water was freely available from a nearby water source. In addition, a prevalence of useful watering equipment, such as hosepipes, was noted and this no doubt further reduces the incentive to carry used water to the gardens.

Given the existing perception that greywater recycling is a waste of time, it would seem that for greywater recycling to be effectively implemented among these gardeners would require a significant degree of education. Incentives are also needed to encourage the utilisation of such water rather than reliance on municipal or borehole supplies that are believed to be easier and simpler to access.

e) Pests

Snails and caterpillars were a major issue for gardeners.<sup>113</sup> It was also found that some gardeners considered earthworms to be a pest.<sup>114</sup> This is an interesting finding, since it reflects a need for further education.

With respect to methods of elimination, the LDU have found that traditional methods such as handpicking pests from the crop and sprinkling ash onto the beds were the most common means of eradicating pests from gardens. The former was also frequently found in this study, particularly when dealing with snails and caterpillars, but the latter was only occasionally mentioned. Most of the gardeners who had some support from NGO staff also had alternative methods, such as using tobacco dust, or planting pest deterring herbs in the beds.

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<sup>113</sup> Next to land, the second most problematic aspect of gardening identified by the subjects of Karaan & Mohamed's study (1996) was also snails in the garden.

<sup>114</sup> A finding that is also noted in the 1994 survey by the LDU.

#### 7.1.4 Perceptions of the value of urban agriculture

In terms of the value that has been attached to urban agriculture in the literature there appear to be divergent opinions regarding the criteria whereby such value should be judged. Many argue, both explicitly and implicitly, that economic value is the primary yardstick by which activities such as this should be judged (e.g. Eberhard, 1998). Others emphasize the importance of building social capital (Beaumont, 1994; Small, 1999). The valuable contribution which urban agriculture can make to the environmental sustainability of urban areas has also been highlighted (Katzchner, 1995).

The value with which urban agriculture is regarded among residents of Cape Flats has gone largely ignored in the literature. Attempts to quantify the value to the household of such activity have been based largely on economic criteria, while qualitative value analysis has largely been left to implicit references when discussing the motivations for gardening and the use of produce. In this study, the value attached to gardening is primarily evident through inferences made from the reasons given for wanting to or having a garden and the use to which produce is put. For instance, more than half the gardeners used their produce to feed the household, which indicates the importance of urban agriculture as a food security measure. On the other hand, subsistence was not usually cited by gardeners as a motivation for gardening. Emphasis was rather placed on socio-aesthetic values such as the pleasure gained from growing the crops. The balance between the social and economic values attached to urban agriculture by vegetable gardeners is also seen in the use of produce for sale or to give to friends and relatives.<sup>115</sup>

Among the authorities, policy-makers and urban planners, researchers have found differences of opinion regarding the value of urban agriculture (de Necker & Uys, cited in Thorgren, 1998). Previously, the attitude of the authorities towards urban agriculture has been characterised as unsupportive (Rogerson, in Thorgren, 1998; Karaan & Mohamed, 1996)<sup>116</sup>. This study has nevertheless found a discernible shift in the attitude conveyed by government towards urban agriculture in the Cape Flats. The development of the provincial and local policies on urban agriculture discussed in sections 3.4.2, the import of the Department of Land Affairs's land policy and the creation of a subdirectoriate within the provincial Department of Agriculture to deal with issues including urban agriculture, suggest a recognition of the importance of urban agriculture and a realization that greater attention needs to be paid to planning for and supporting urban agriculture. That there are still major changes required before the situation reaches active levels of support by government and local authorities is emphasised by Small, who feels that there is a 'tangible absence of committed support from Government' (Small, pers. comm, 2000). Similar opinions have been expressed by NGO staff working in the field of animal husbandry (Finger, pers. comm. 1999). The policies mentioned above have also come under criticism for, for instance, adopting a top-down planning approach and a policy whereby

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<sup>115</sup> That this is a relatively frequent phenomenon was also found by the LDU (1994), which established that around 40% of gardeners give away surplus food, and a further 40% also sell extra food produced.

<sup>116</sup> Writing in the early 1990s, Rogerson (*Ibid*) suggested that authorities did not recognize plans for or support urban agriculture. By the mid-1990s Katzchner was still highlighting the significant lack of adequate policy, legal and institutional support for urban agriculture and Karaan & Mohamed (1996) concluded that it was the very lack of public support services for urban agriculture that saw the non-government sector emerging as a necessary replacement (Karaan & Mohamed, 1996:49).



government will only deal with highly organised groups, such as NGOs or CBOs with a strong constitution, despite all indications that it is those with low levels of organisational skills who require the greatest assistance in accessing land.<sup>117</sup>

Part of the reluctance on the part of urban planners to actively support urban agriculture may stem from a perceived conflict between planning objectives and agricultural activity. Planners appear opposed to cultivation on a large scale, because they fear that it may maintain the fragmented spatial pattern of Cape Town. The consolidation and densification of Cape Town's fragmented spatial pattern is an explicit goal of the MSDF (see section 3.4). However, Katzchner (1995) disputes the belief that urban densification and urban agriculture are mutually exclusive. Within any urban planning framework, even those geared towards densification, there exists sufficient room for the inclusion of urban agriculture. Given that the MSDF planning framework also includes a Metropolitan Open Space System and that urban agriculture had specifically been identified as one of the possibilities for such an open space system, the fears noted above appear unwarranted.

Aside from the potential for incongruities between high density urban development planning and urban agriculture, other reasons that have been proposed to explain why urban agriculture has such a low status as a formal land-use in Cape Town are the high cost of land and the relatively higher demands for housing. There are also other obstacles to active government support for urban agriculture. These include limited administrative capacity and the likelihood of domination by established interests as well as the expectations of a public institution that it should assure effective food markets and provide access to inputs. Nevertheless, the need to find solutions to these obstacles, and to secure support for urban agriculture from the local government in particular, is emphasised by Fermont *et al.*, who state that 'a prerequisite for the developing of vegetable production is a favourable attitude of the city council towards urban agriculture, as gardeners need their permission to cultivate open spaces' (Fermont *et al.* 1998:39).

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<sup>117</sup> As early as 1994, the avoidance of consultation with the grassroots gardeners was being criticised: 'Community involvement in determining sufficient conditions of tenure could be more effective than blueprint style planning procedures' (May & Rogerson, 1994 in Thorgren, 1998).

## **8. CONCLUSIONS & RECOMMENDATIONS**

### **8.1 Conclusions**

From this study, the following deductions may be made about the practice of urban agriculture among residents of the Cape Flats at the present time:

- Urban agriculture exists in the townships on the Cape Flats, and there is considerable evidence that Cape Flats residents enjoy participating in urban agriculture activities. There are also a number of residents who do not have gardens but would like to in future. In this regard, there is a noticeable level of motivation to do vegetable gardening. Despite the numerous constraints facing Cape Flats vegetable growers, such as the costs of production and the relatively harsh environment in which they live, soil-based food production continues to be evidenced in the low-income townships on the Flats.
- The majority of gardeners are usually unemployed, middle-aged females with some degree of previous experience in gardening. This segment of the population therefore constitutes the main target group for strategies geared at improving current urban farming practice.
- NGOs play a vital role in supporting urban food growers through the provision of skills training and access to free or subsidised agricultural resources and inputs. NGOs also play an important role in facilitating organisational development and access to land. NGOs working in the field of urban agriculture on the Cape Flats therefore have a valuable role to play in the future development of urban agriculture in Cape Town. They are probably in the best position to facilitate the growth and promotion of urban agriculture in this city, but to do so they require financial support and sufficient staff complements.
- Government, particularly local authorities, has been criticised, both in the literature and by local practitioners, for a lack of commitment to facilitating and supporting urban agriculture. Initiatives by government aimed at providing improved access to land for small-scale farmers are a step in the right direction, but effective strategies are still required to ensure active participation by government structures in co-ordinating, funding, facilitating and/or supporting urban agriculture in the townships.
- Emphasis on the value of urban agriculture in the past has resulted in a low assessment of the potential for urban agriculture to improve the quality of life in the townships. This has led to low prioritisation of urban agriculture at government level, and may even have reinforced government apathy on the issue.
- The fact that urban farming exists in the townships, and that there are NGOs dedicated to providing support services for vegetable gardeners, suggests that there is significant support for the practice of urban agriculture in Cape Town and that such support can and should be strengthened through co-operation and communication among the various role-players who have something to offer in the continued development and further growth of urban agriculture as a productive socio-economic activity.

These conclusions are based on research that is limited by various factors, and which reflects the socio-economic and political circumstances of the time in which it was conducted so the study's findings represent only a moment in time. Indeed, there is evidence of changes to garden group structures and their performance since the completion of the fieldwork. Nevertheless, it is believed that the data gathered during this research is valuable in that it provides other researchers with a starting point from which to further explore the nature of urban agriculture in Cape Town and its development as it progresses in the new millennium.

## **8.2 Recommendations**

Based on the findings of this study, the following recommendations are made.

### ***Information-exchange***

Information-exchange between all bodies involved in promoting urban agriculture should be encouraged. The findings of all research conducted on urban agriculture, including this report, should be disseminated to all parties concerned, particularly the local NGOs and the gardeners whom they support. Other parties who should be part of the information-exchange process include local government, funding agencies, and researchers in the field. In this regard, forums for information-exchange, such as the Urban Agriculture Discussion Forum, should be promoted.

Opportunities for information exchange at grassroots level should also be created. These could include holding of workshops or conducting site visits to other gardens in and around Cape Town. Such opportunities may provide the gardeners with opportunities to draw inspiration from the successes of other projects/home gardens, as well as learn from their failures. Gardeners should also be encouraged to share their experiences and activities with non-gardening households in their communities in order to increase awareness about the potential benefits of urban agriculture and facilitate horizontal transfer of skills.

### ***Partnerships***

Partnerships should be fostered between different urban agriculture stakeholders and interest groups. This is particularly relevant in respect of local government and NGOs; where there is significant potential for co-operation in the cultivation of open spaces and vacant or underutilised land. Where such land is under pressure for other land-uses, the local authority should consider approaching the Department of Land Affairs for funds to obtain land as municipal commonage. Partnerships could also be formed between NGOs and funding organisations or agencies, in order to ensure continuity and provide the medium-term inputs required to ensure long-term sustainability.

### ***Policy***

Policy formulation should be an iterative process, involving all stakeholders and interest groups. It is essential that the policies developed in support of urban agriculture provide for the interests of those who are its main practitioners and take cognizance of the constraints facing these groups. It may be, for instance, that accommodation of varying literacy levels and organisational skills is required to facilitate the participation of urban agriculturists who come from disadvantaged backgrounds.

### ***Promotion of urban agriculture***

Local NGOs should continue to provide the support that they currently offer to urban agriculturists in the Cape Flats. They should also pursue government commitment to support for urban agriculture and develop partnerships between themselves and with local government to promote co-operation and sharing of resources and expertise

Promotion of urban agriculture in the townships should target both those who would match the potential-gardener-profile described in this study and other potential groups, such as the youth. Promotional strategies should consider that the target audience may have previous experience in agriculture, and that while such previous experience may not be suited to the conditions of the Cape Flats it may nevertheless prevent would-be gardeners from actively seeking advice. Such marketing should only be done following an extensive study regarding the economic viability of market gardening in order that this information may be presented together with the social benefits of urban agriculture, so that the target audiences are able to make informed decisions about the potential rewards of urban agriculture.

In order to strengthen the long-term promotion of urban agriculture, further market research is required to determine potential markets that could increase the economic value of urban agriculture. The findings of such research must be communicated to the gardeners themselves.

### ***Funding***

- It is recommended that funding agencies consider providing support for:
  - The continued operation of local NGOs involved in urban agriculture, particularly those with those who focus efforts on introducing initiatives to make urban gardening sustainable.
  - Building an understanding among local government structures of the role that urban agriculture can play in the urban/peri-urban areas and its importance as a socio-economic activity.
  - Administrative capacity-building of local authorities to enable them to accommodate the administrative requirements associated with supporting and/or promoting urban agriculture.
  - Training courses and information dissemination and/or exchange at grassroots level, i.e. among and between the gardeners themselves.
  - Market research and determining the economic value of urban agriculture, both now and projected estimates for the future.
  - Further research.

### ***Research***

Further research is required in a number of areas, owing to both gaps in the existing literature and the practical needs of implementing and promoting urban agriculture in the townships in a manner that will be sustainable in the long-term. Areas for additional research include:

- Suitable, and viable markets for urban agriculture products
- All aspects of livestock farming/Husbandry in the CMA
- The links between home gardening and gardening groups, and the potential for promotion of the one to lead to the other
- Areas in which NGOs can improve their services to urban agriculturists



- An evaluation of the significance of urban agriculture that is holistic in its approach, and which therefore includes an assessment of *both* the economic and social value of urban agriculture

It is imperative that the results of any research conducted be reviewed, and the recommendations taken under consideration by all parties with a role to play in urban agriculture in Cape Town. This applies also to previous work that has been conducted, since many of the recommendations made in previous studies have yet to be implemented. The findings and recommendations of any research conducted with the assistance of local urban agriculture groups should reach the organisations that gave their time and resources to be involved in the study.

#### ***Advice to Gardeners/ Gardening Groups***

The following are a list of recommended actions for home gardeners and gardening groups:

- Participate in the local discussion forums and engage in information-exchange
- Access unutilised land within communities, including church properties and school premises. Where possible, negotiate the use of servitude land and/or municipal commonage with local government (i.e municipalities)
- Where possible, apply for grants from the Department of Land Affairs
- Approach NGOs to assist the group/household with the gardening activities
- Apply pressure on government to secure government interest in, and support of, urban agriculture activities.

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Fulvio Grandin, 9 September 1999.

Keith Wiseman, Cape Metropolitan Council, 17 September 1999

Tania Katzschner, Cape Metropolitan Council, 19 September 1999

Najma Mohamed, Programme for Land and Agrarian Studies, 13 October 1999.

Mpho Molaoa, Land Development Unit, 13 October 1999

Ratlali Finger, Centre for Integrated rural development, 14 October 1999



Nomtha Dilima, TSOGA environmental resource centre, 18 October 1999  
 Gary Glass, Oude Molen Farm, 21 October 1999  
 Jens Kuhn, Cape Metropolitan Council, Directorate of Housing, 22 October 1999  
 Johnny Slingers, Department of Land Affairs, 1 November 1999  
 Michelle Robertson-Swift, OvP Associates, 2 November 1999  
 Landy Wright, Abalimi Bezekhaya, 3 November 1999  
 Angelina Zenani, Masizakhe Gardening Group, 6 November 1999  
 Pat Featherstone, Food Gardens Foundation, 11 November 1999  
 Cynthia Bebeza, Sinethemba Gardening and Catering group, 19 November 1999  
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 Sindiswe ?, Abalimi Bezekhaya, 23 November 1999  
 Vicky Yonkwana, Quaker Peace Centre, 23 November 1999  
 Mr Gabriel, Acacia Primary School, 26 November 1999  
 Ms. Mavis Mcutshenge, uManyano Support Group, 29 November 1999  
 Mr Andre du Plessis, Peninsula School Feeding Scheme, 30 November 1999  
 Mr David Galland, Peninsula School Feeding Scheme, 30 November 1999  
 Masibambane Gardening Group, 2 December 1999  
 Mr Jeremy Routledge, Quaker Peace Centre, 3 December 1999  
 Mr Eldon van Boom, researcher involved in research at SCAGA, 4 January 2000.  
 Rob Small, Abalimi Bezekhaya, 4 April 2000.  
 Mpho Molaoa, Land Development Unit, 20 April 2000

## Appendix A1

### Contacts List

	Name	Organisation	Position	Tel / Fax / E-mail	Address
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3.	Khristina Khaba	Abalimi Bezekhaya	Fieldworker (Khayelitsha)	C/o Abalimi	As above
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5.	Sindiswa Mahuza	Abalimi Bezekhaya	Fieldworker (Khayelitsha)	361-3497	As above
6.	Julius Mbula	Abalimi Bezekhaya	Manager of Nyanga-Gugulethu Centre	C/o Abalimi	As above
7.	Julius Mcono	Abalimi Bezekhaya	Gardener at Nyanga-Gugulethu Centre	C/o Abalimi	As above
8.	Clara Mbabane	Community gardener at SCAGA	Gardener	C/o Abalimi	As above
9.	Monica Duda	Masibambane Gardening Group	Gardener	C/o Abalimi	As above
10.	Mavis Mcutshenge	UManyano Support Group	Chairperson	C/o Abalimi	As above
11.	Fulvio Grandin	Kommetjie Environmental Action Group (KEAG)	Co-ordinator: Permaculture and ecological land-use	783-3433	P.O.Box 30 Kommetjie 7976
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16.	Vicky Yokwana	Quaker Peace Centre	Instructor: Gardens	386-1358 (Nyanga office)	As above
17.	Mpho Molaoa	Land Development Unit at UWC	Field work co-ordinator	082-472-947 959-3265 Fax: 951-4459	University of Western Cape Private Bag X17 Bellville 7535
18.	Angelina Zenani	Masizakhe Gardening Group	Co-ordinator	385-0444 (h)	Masizakhe Environmental Project P.O. Box 1613 David Street New Crossroads
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21.	Pat Featherstone	Food Gardens Foundation	Fieldwork co-ordinator	794-2103 082-671-5438	C/o Constantia Waldorf School Spaanschemat River Rd Constantia 7800
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23.	Esther Busquet	Foreign Student studying in Cape Town	Interest: Nutrition	683-2320	C/o Abalimi

24.	Camilla Thorgren	Student	Wrote study on Food Gardens Foundation	Fax: (0946) +8- 873 579 <a href="mailto:Camithor@hotmail.com">Camithor@hotmail.com</a>	Vassvägen 22 168 57 Bromma Sweden
25.	Katrin Matschke	Foreign Student studying in Cape Town	Interest: Sociology	13324225@rgo.sun.ac.za	c/o University of Stellenbosch
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27.	Franscois Theunissen	Cape Metropolitan Council – Directorate for planning, environment and housing	Director - Spatial Planning	487-2310	44 Wale Street Cape Town
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36.	Doug Reeler	Community Development Resource Association	Consultant – has advised PELUM	462-3902	P O Box 221 Woodstock 7915
37.	Eldon van Boom	Researcher	Involved in Fermont study (did socio-economic study)	082-806-8828 (work cell) 082-806-8486 (personal cell)	
38.	Marius Paulse	Provincial Administration: Western Cape, Department of Economic affairs, Agriculture & Tourism	Director of RDP and Land Reform sub-directorate	808-5018/9 Fax: 808 5251	Provincial Administration of the Western Cape
39.		South African Labour and Development Research Unit (SALDRU)		650-7147 fax: 23-2456	
40.	Johan Carson	Agriculture Research Council (Pretoria)			
41.	Haeddy Swanlea	PELUM (Participatory ecological land use management)	Co-ordinator	(011) 640-5786	P.O.Box 15934 Doomfontein 2028
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43.	Tim Hoffman	National Botanical Institute	Involved with studies done in Namaqualand	762-1166	Private bag X7 Claremont 7735
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51.	Melisiswe Sikweza	Department of Health		918-1729 or 083-363-4528	
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54.	Dennis Nichol	Rabie Property Developers	Developed community garden at Westlake	762-7080	
55.	Cathy Ingram / Brian Joffen	Camphill Village		572-2345	
56.	Yonn Dierwechter	Student at London School of Economics	Student who conducted research in Cape Flats over 6-7 months in 1999	<a href="mailto:Y.A.Dierwechter@lse.ac.uk">Y.A.Dierwechter@lse.ac.uk</a>	N/A
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## Appendix A2

### Questionnaire for research on urban agriculture in the Cape Flats townships: Urban Farming Groups

#### 1. *Origins, background and objectives*

- What kind of agricultural activities does the group undertake? (Cattle? Crops? Mixed?) \_\_\_\_\_
- When did the group start? \_\_\_\_\_
- Why did you form a group? (i.e. why a group and not an individual?)  
\_\_\_\_\_  
\_\_\_\_\_
- Whose idea was it to start a group? \_\_\_\_\_
- How was it started? \_\_\_\_\_  
\_\_\_\_\_

#### 2. *Membership, recruitment criteria*

- How many members did you start with? \_\_\_\_\_
- How many members are there at the moment? \_\_\_\_\_
- How many are male and how many female? Male: \_\_\_\_\_ Female: \_\_\_\_\_
- What are their ages / what is the average age the group? \_\_\_\_\_  
\_\_\_\_\_
- Are there any female headed households, and if so, how many? Y/N, \_\_\_\_\_
- Have there been any changes in membership since the group started, in terms of the number of people or kinds of people who are in the group? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- Who is allowed to become a member? \_\_\_\_\_
- Who decides who can become a member? \_\_\_\_\_
- Are there membership fees? \_\_\_\_\_
- Where do the members come from (area of residence and area of origin)?  
Residence (current): \_\_\_\_\_  
Origin (previous): \_\_\_\_\_



- Did members know each other before? (e.g. church, relatives, neighbours, friends, other groups) \_\_\_\_\_

### **3. Previous experience & progress**

- Have the members of the group been involved in this kind of farming/vegetable growing before? \_\_\_\_\_  
\_\_\_\_\_
- If yes: Where did the members of the group learn or get advice from then? (own experience, relatives/friends/neighbours, any other organisations?) \_\_\_\_\_  
\_\_\_\_\_
- What are the groups' current sources of knowledge? (e.g. technical advice or own knowledge. E.G. rural farming background, NGOs, other community members) \_\_\_\_\_  
\_\_\_\_\_
- Have there been any changes in the groups' activities over time? (performance, new activities or less activities compared to start) \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- Are there any other activities that the group performs other than farming (other income generating activities or social functions e.g. support in times of emergency /socialising) \_\_\_\_\_  
\_\_\_\_\_

### **4. Organisation and management of production**

#### **LAND**

- Where is the land? \_\_\_\_\_
- How big is the land? \_\_\_\_\_
- How did you get the land? \_\_\_\_\_
- Do you have easy access to the land? \_\_\_\_\_

### **LABOUR & MANAGEMENT**

- Who works in the garden? \_\_\_\_\_
- Do different members do different activities, and if so, what? \_\_\_\_\_  
\_\_\_\_\_
- Are outsiders, such as relatives or neighbours involved in the garden? \_\_\_\_\_
- Is each person responsible for their own plot, or does everyone share the work of looking after all the plots in the garden? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- How are plots allocated to the members? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- How does decision making happen? \_\_\_\_\_
- How are leadership roles decided? \_\_\_\_\_

### **5. Soil types**

- How do you describe the soils within the gardens? \_\_\_\_\_
- How do you know if the soil is fertile or not? \_\_\_\_\_
- Are there instances when topsoil is washed away from your garden? \_\_\_\_\_
- What do you do when your soil is washed away? \_\_\_\_\_  
\_\_\_\_\_
- Do you undertake anything for soil fertility, maintenance or improvement?
  - a) Organic household waste
  - b) Crop residues
  - c) Manure [Chicken/Cattle]
  - d) Inorganic fertilisers
  - e) Mulch
  - f) Crop Rotation
  - g) Intercropping
  - h) Other: \_\_\_\_\_
- If mention fertiliser: Where do you get the fertiliser? \_\_\_\_\_

6. *Cultivation methods*

- What planting arrangement do you use? (trench, raised bed, flat bed, ridges etc.)

\_\_\_\_\_

- What land preparation is done before planting? \_\_\_\_\_

\_\_\_\_\_

- What equipment do you use for land preparation? \_\_\_\_\_

- Do you use different planting arrangements for summer and for winter?

\_\_\_\_\_

- How often do you plant? \_\_\_\_\_

- What kind of crops do you grow, and when? (Circle summer, cross winter)

<b>Bush Beans</b>	<b>Broad Beans</b>	<b>Beetroot</b>	<b>Butternut</b>	<b>Cabbage</b>
<b>Cauliflower</b>	<b>Carrots</b>	<b>Celery</b>	<b>Cucumber</b>	<b>Eggplant</b>
<b>Green Pepper</b>	<b>Green Bean</b>	<b>Herbs</b>	<b>Lettuce</b>	<b>Leeks</b>
<b>Melons</b>	<b>Mielles</b>	<b>Onion</b>	<b>Potatoes</b>	<b>Peppers</b>
<b>Peas</b>	<b>Pumpkin</b>	<b>Radishes</b>	<b>Spinach</b>	<b>Squash</b>
<b>Tomatoes</b>	<b>Turnips</b>	<b>Broccoli</b>		

Other: \_\_\_\_\_

- Please rank the most important crops for selling and for using at home (Indicate the rankings on the list below).

<b>Bush Beans</b>	<b>Broad Beans</b>	<b>Beetroot</b>	<b>Butternut</b>	<b>Cabbage</b>
<b>Cauliflower</b>	<b>Carrots</b>	<b>Celery</b>	<b>Cucumber</b>	<b>Eggplant</b>
<b>Green Pepper</b>	<b>Green Bean</b>	<b>Herbs</b>	<b>Lettuce</b>	<b>Leeks</b>
<b>Melons</b>	<b>Mielles</b>	<b>Onion</b>	<b>Potatoes</b>	<b>Peppers</b>
<b>Peas</b>	<b>Pumpkin</b>	<b>Radishes</b>	<b>Spinach</b>	<b>Squash</b>
<b>Tomatoes</b>	<b>Turnips</b>	<b>Broccoli</b>		

(i.e. Which crops are most important for selling? \_\_\_\_\_)

and Which crops are most important for using at home? \_\_\_\_\_)

- What types of crops do you like most, and why? \_\_\_\_\_

\_\_\_\_\_

- What is the yield like, for the various crops? \_\_\_\_\_

\_\_\_\_\_

- Do you use combinations of crops? (e.g. intercropping) \_\_\_\_\_

- What is the source of your water? (tap, well, stream, rainfed, etc.) \_\_\_\_\_
- What watering system do you use? (hose, sprinkler, drip irrigation, furrows, seasonal rain) \_\_\_\_\_
- Do you use waste water as well? If yes, why and all types of waste water? If not, why not? \_\_\_\_\_
- Where you get your inputs?  
 Seeds: \_\_\_\_\_  
 Fertilisers: \_\_\_\_\_  
 Other: \_\_\_\_\_
- What problems do you experience with farming (for example: input supply, production, soil fertility, drought, pests, diseases, marketing of products, theft) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- What pests do you encounter and how do you control these? \_\_\_\_\_  
 \_\_\_\_\_
- What are the diseases affecting your crops, and how can you control these? \_\_\_\_\_  
 \_\_\_\_\_
- Are there alternative prevention measures for pests and diseases? \_\_\_\_\_  
 \_\_\_\_\_

#### **7. Financial management & production**

- What do you do with the produce?      **a) Sell   b) Consume   c) Give to others**  
 \_\_\_\_\_
- If sale: Where do you sell? \_\_\_\_\_  
 What makes you decide to sell? \_\_\_\_\_  
 Do you sell at specific times of year? \_\_\_\_\_
- If produce is sold as group activity, what do you do with the benefits? \_\_\_\_\_
- How are benefits distributed? (individual/communal, or partly mixed?) \_\_\_\_\_  
 \_\_\_\_\_



**7. Problems/benefits?**

- Do you have any problems working together? \_\_\_\_\_
- Are there any benefits in working together? \_\_\_\_\_
- What makes things work out or not? \_\_\_\_\_

**8. Attitude and expectations**

- What do other people in their community think of your farming group?

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- What are your plans for the future? \_\_\_\_\_

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- Draw a rough sketch of the garden layout.

## **Appendix A2 : Checklist for urban farming/agricultural groups**

1. *Origins, background and objectives* (to get background and current status of urban agriculture group)
  - When did the group start?
  - Why did you form a group? (objective, why a group and not an individual?)
  - Whose idea was it to start a group?
  - How was it started?
2. *Membership, recruitment criteria*
  - How many members at the moment (male/female, age, female headed household)?
  - How many members did you start with?
  - Changes in memberships (number, what kind of members?)
  - Who is allowed to become a member? And who decides?
  - Membership fees?
  - Where do the members come from (area of residence)?
  - Did members know each other before? (e.g. church, relatives, neighbours, friends, other groups)
3. *Practical activities and progress*
  - What kind of activities? (livestock/crop production)
  - Who is doing what?
  - Have there been any changes over time in activities? (performance, new activities or less activities compared to start)
  - Are there any other activities the group perform outside farming (other income generating activities, social functions e.g. support in times of emergency / socialising)
  - Sources of technical advice or own knowledge (e.g. rural farming background and own experience, relatives/friends/neighbours and other community members, NGOs, any other organisations?)
  - Have they been involved in farming/vegetable growing before?
4. *Organisation and management of production*
  - Leadership roles, how allocated?
  - How did they get the land?
  - Where is their land?
  - Access to land, tenureship?
  - How do they allocate tasks and plots to their members?
  - Decision making and distribution of benefits (individual/communal, or partly mixed?)
5. *What kind of crops are they growing and how do they rank these*

Bush Beans	Broad Beans	Beetroot	Butternut	Cabbage
Cauliflower	Carrots	Celery	Cucumber	Eggplant
Green Pepper	Green Bean	Herbs	Lettuce	Leeks
Melons	Mielies	Onion	Potatoes	Peppers
Peas	Pumpkin	Radishes	Spinach	Squash
Tomatoes	Turnips			

**Other:** \_\_\_\_\_

**6. Cultivation methods**

**Topics:**

- Planting arrangement (trench, raised bed, flat bed, ridges etc., difference between summer and winter?)
- Timing of cultivation (winter/summer/all-year? If both, summer and winter ask for crop types and location [garden/off-plot]).
- Crop combinations (e.g. intercropping)
- Watering - source of water (tap, well, stream, rainfed, etc.) Do they use waste water as well? If yes, why and all types of waste water? If not, why not?
- Type and sources of inputs (seeds, fertilisers [organic, eg. Compost, cattle/chicken manure], chemicals, green manure, different combinations)
- Division of labour: Who is doing the work (responsibilities and involvement of household members by gender and age or other people outside of household [relatives, neighbours etc.] & cash/food)
- If there are several plots: Individual or shared responsibility?

**7. Soil types**

- How do they describe their soils within the gardens?
- Do they experience any problems related to the soil?
- Do they undertake anything for soil fertility, maintenance or improvement (e.g. organic household waste, crop residues, manure [chicken/cattle], inorganic fertilisers, mulch, crop rotation, intercropping etc.) If they mention any type of fertiliser, ask them where they get it.

**8. Production: What do they do with their harvest?**

- If they grow more than one crop, ask them to rank them according to importance for home consumption and for sale
- Do they also give some of their produce to others (relatives/friends/neighbours)?
- If sale: Where do they sell? What makes them decide to sell? Is there a difference in selling behaviour throughout the year (e.g. summer/winter)

**9. Financial management**

- E.g. if production is sold as group activity, what do they do with the benefits?
- Access to inputs (both individually or as a group)?

**10. Problems/benefits?**

What makes things work out or what problems make working in groups difficult

**11. Problems related to agriculture**

Problems associated with farming (for example: input supply, production, soil fertility, drought, pests, diseases, marketing of products, theft, etc.)

**12. Attitude**

- What do other people in their community think of their farming group?
- What are their plans for the future?

**Questionnaire for research on urban agriculture in the Cape**  
**Flats townships: Transect Walk Households Survey**

*Before starting the questionnaire...*

- 1) Introduce yourself**
- 2) Explain the project**
- 3) Ask permission to ask do the questionnaire**

**a) Interview details**

- Date: \_\_\_\_\_
- Plot number: \_\_\_\_\_
- Street address: \_\_\_\_\_
- Township: \_\_\_\_\_
- Language(s) spoken during interview: \_\_\_\_\_

**b) Details of respondent**

- Name of respondent: \_\_\_\_\_
- Age of respondent: \_\_\_\_\_
- Gender of respondent: M/F
- Marital Status of respondent:  
**Single      Married      Divorced      Separated      Widowed      Other**

**c) Details of family/household**

- Gender of head of household: M/F
- Where does your family come from? \_\_\_\_\_
- When did you arrive in Cape Town? \_\_\_\_\_
- How long have you lived in this house? \_\_\_\_\_
- How many people live in the house? \_\_\_\_\_
- How many rooms are there in the house (including kitchen and living rooms)?  
\_\_\_\_\_
- Types of income/jobs: \_\_\_\_\_
- How did you get this plot? \_\_\_\_\_

*Before continuing, check if there is a garden on the property...*

If **NO**, complete section A.

If **YES**, skip section A, go to the next page and continue with the rest of the questionnaire.

**If YES - Go to page 3**

### **SECTION A: Questions for households *WITHOUT* a garden**

- Why don't you have a garden? \_\_\_\_\_
- Do you want a garden? \_\_\_\_\_
- Why/why not? \_\_\_\_\_

- What would you grow in your garden?

Bush Beans	Broad Beans	Beetroot	Butternut	Cabbage
Cauliflower	Carrots	Celery	Cucumber	Eggplant
Green Pepper	Green Bean	Herbs	Lettuce	Leeks
Melons	Mielies	Onion	Potatoes	Peppers
Peas	Pumpkin	Radishes	Spinach	Squash
Tomatoes	Turnips	Broccoli	Flowers	Other

- Is there anyone in the family/household with gardening experience? Y/N  
a) Who? \_\_\_\_\_  
b) How did they get gardening experience? \_\_\_\_\_
- How much do you spend on vegetables in a week?

*Ask permission to draw a map of the garden and the property*

*Thank the person for taking the time to do the questionnaire!*



## **Section B: Questions for households WITH a garden**

### ***a) Details of gardener (if different from respondent) & labour and management of garden***

- Who works in the garden? \_\_\_\_\_
- Age: \_\_\_\_\_
- Gender: M/F
- Marital Status of respondent:  
**Single    Married    Divorced    Separated    Widowed    Other**
- Level of education: \_\_\_\_\_
- Do you have a job? Y/N  
Type: \_\_\_\_\_
- When was the garden started? \_\_\_\_\_
- Do different household members do different things in the garden? Y/N  
If yes, what do they do? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- Are outsiders, such as relatives or neighbours involved in the garden? \_\_\_\_\_

### ***b) Skills/Experience***

- Have household members been involved in farming/vegetable gardening before?  
Y/N
- How did you learn to garden?
  - 1) Organisations (Name? \_\_\_\_\_)
  - 2) Friends / family / neighbours
  - 3) Own experience - trial & error
  - 4) At school
- Do you ask anyone for advice/help? Y/N  
If Yes, who? \_\_\_\_\_
- Do you give advice elsewhere? Y/N  
If Yes, to whom? \_\_\_\_\_  
If Yes, how? \_\_\_\_\_  
\_\_\_\_\_

- What have you changed in practice from experience? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**c) Soil, water and other resources**

**SOIL**

- How do you describe the soils within your garden? \_\_\_\_\_
- How do you know if the soil is good or not? \_\_\_\_\_
- Do you do anything to make your soil better? Y/N  
If Yes, what do you do? \_\_\_\_\_

**WATER**

- Where do you get your water? (tap, well, stream, rainfed, etc.) \_\_\_\_\_
- How do you water? \_\_\_\_\_
- Do you use waste water from the kitchen or bathroom in the garden? Y/N  
If yes, all types of waste water? \_\_\_\_\_  
\_\_\_\_\_  
If not, why not? \_\_\_\_\_  
\_\_\_\_\_

**OTHER RESOURCES**

- Where do you get your seeds? \_\_\_\_\_
- Where do you get your fertilisers, compost and/or manure? \_\_\_\_\_  
\_\_\_\_\_
- Where do you get tools/equipment? \_\_\_\_\_

**d) Cultivation**

- Do you do any gardening elsewhere (e.g. other plots/gardening groups)? Y/N  
If so, who/where: \_\_\_\_\_  
\_\_\_\_\_
- What land preparation is done before planting? \_\_\_\_\_  
\_\_\_\_\_
- When do you plant? \_\_\_\_\_
- Do you do anything different for summer and for winter? Y/N  
\_\_\_\_\_

- What kind of crops do you grow?

Bush Beans	Broad Beans	Beetroot	Butternut	Cabbage
Cauliflower	Carrots	Celery	Cucumber	Eggplant
Green Pepper	Green Bean	Herbs	Lettuce	Leeks
Melons	Mielies	Onion	Potatoes	Peppers
Peas	Pumpkin	Radishes	Spinach	Squash
Tomatoes	Turnips	Broccoli	Flowers	Other

- What are your three most favourite crops? \_\_\_\_\_

\_\_\_\_\_

**e) Financial Management and Operation**

- What do you do with the produce?      a) Sell   b) Consume   c) Give to others

\_\_\_\_\_

- If sale: Which crops do you sell? \_\_\_\_\_

Where do you sell? \_\_\_\_\_

Why do you sell? \_\_\_\_\_

\_\_\_\_\_

- How much do you spend on vegetables in a week? \_\_\_\_\_

**f) Problems**

- What problems do you experience with farming (for example: input supply, production, soil fertility, drought, pests, diseases, marketing of products, theft)

\_\_\_\_\_

\_\_\_\_\_

- What pests do you find in the garden? \_\_\_\_\_

- What do you do about these pests? \_\_\_\_\_

- What diseases do you find in the garden? \_\_\_\_\_

- What do you do about these diseases? \_\_\_\_\_

**g) Attitude and expectations**

- Why do you garden? \_\_\_\_\_

- What do your family and neighbours think of your gardening?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

- What are your plans for the future? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- Do you know of any gardening projects in this area? Y/N (If yes, name?): \_\_\_\_\_
- Would you like to join a gardening group? Y/N.  
Why: \_\_\_\_\_  
Why not: \_\_\_\_\_

*Ask permission to draw a map of the garden and the property*

***Thank the person for taking the time to do the questionnaire!***

## **Appendix A3 : Checklist for individual household interviews**

1. Draw a sketch map of the homestead to show how people utilise their space their access to wealth and resources.
2. Socio-economic data:
  - Name of respondent, age, gender, marital status, education level, place of origin (if different from current residence ask for how long they have been in present residence, motives for moving etc.)
  - Number of people in the household (adults, children, dependants)
  - Age, sex and education level of other household members
  - Sources of incomes of household (all household members) and activities. If more than one ask for ranking.
  - Size of household
  - Domestic labour profile
3. Involvement in Agricultural Activities

**IF NO:** If they are not involved in any gardening activities, ask why not and what they think of agriculture in general. Would they like to be involved in any farming activities?

**IF YES:** If gardening / agriculture is one of their activities (either cash or food), ask the following:

1. *Start of agricultural activities and reasons (cash/food, both)*
2. *Type of agricultural activities (crop production/livestock)*
3. *Access to land*
  - Location of plot: home gardens, off-plot? If off-plot, where?
  - Access: how was land allocated to them? Can they use it every year?
4. *What kind of crops are they growing (summer/winter crops). If livestock, what types and number of livestock*
5. *Cultivation methods: How are they growing them?*

Topics:

  - Planting arrangement (trench, raised bed, flat bed, ridges etc., difference between summer and winter?)
  - Timing of cultivation (winter/summer? If both, ask for summer and winter crops and location [garden/off-plot]).
  - Crop combinations (e.g. intercropping)
  - Watering - source of water (tap, well, stream, rainfed, etc.) Do they use waste water as well? If yes, why and all types of waste water? If not, why not?
  - Type and sources of inputs (seeds, fertilisers [organic, eg. Compost, cattle/chicken manure], chemicals, green manure, different combinations)
  - Division of labour: Who is doing the work (responsibilities and involvement of household members by gender and age or other people outside of household [relatives, neighbours etc.] & cash/food)
  - If there are several plots: Individual or shared responsibility?
6. *Soil types*
  - How do they describe their soils within the gardens?



- Do they experience any problems related to the soil?
- Do they undertake anything for soil fertility, maintenance or improvement (e.g. organic household waste, crop residues, manure [chicken/cattle], inorganic fertilisers, mulch, crop rotation, intercropping etc.) If they mention any type of fertiliser, ask them where they get it. If compost, how they make it and sources of material.

**7. Production: What do they do with their harvest?**

If they grow more than one crop, ask them to rank them according to importance for home consumption and for sale. Do they also give some of their produce to others (neighbours, relatives, friends) or exchange these for other resources?

If sale: where do they sell? What makes them decide to sell? Is there a difference in selling behaviour throughout the year (e.g. summer/winter)

**8. Rural/Urban linkages**

Children, close relatives in rural areas, involvement in agriculture in rural areas during rainy season, exchange of food, support to/from relatives in rural areas, etc.

**9. Problems related to Agriculture?**

**10. Interests in urban farming**

Have they been involved in farming / vegetable growing before?

Sources of advice, own experience, relatives / friends / neighbours, any other organisations?

What are their plans for the future?

**11. Attitude**

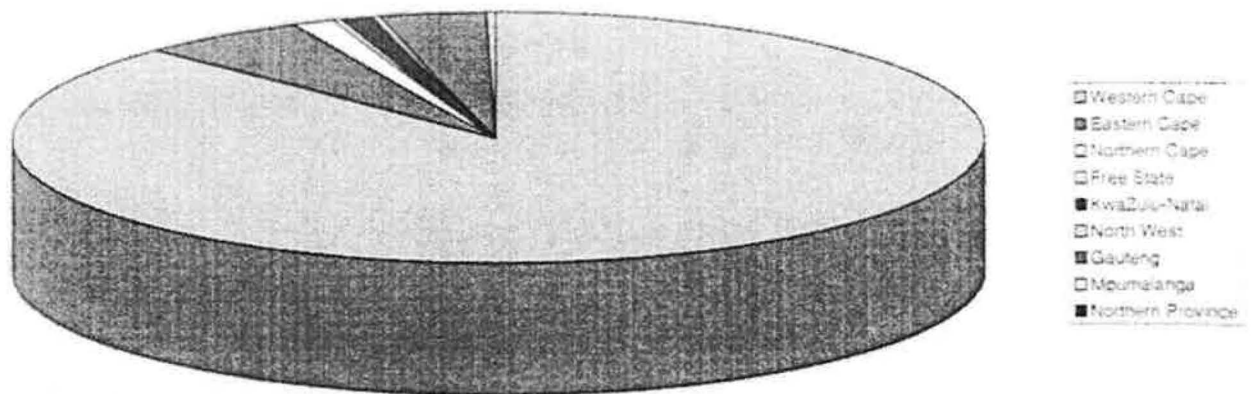
What do other people in their community think of their farming activities?

**12. Social linkages**

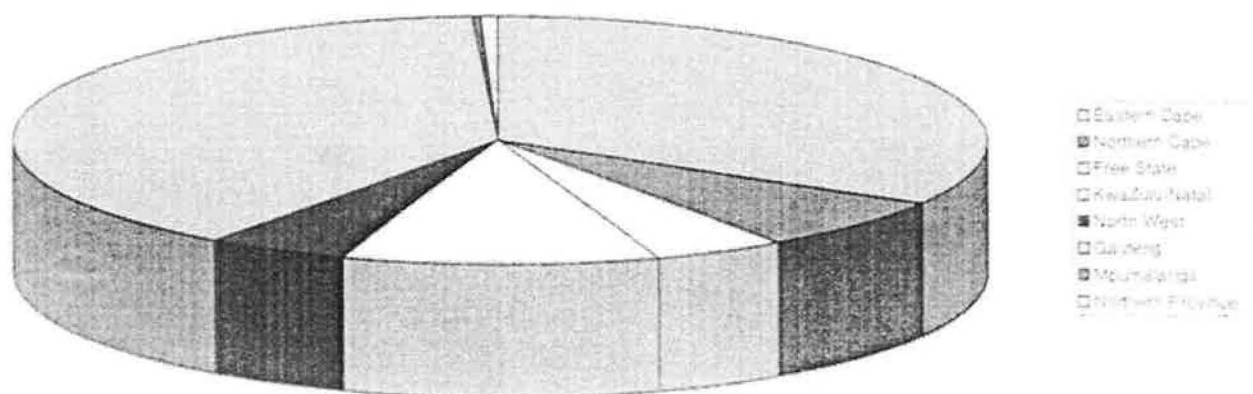
Are they members of any other groups and/or involved in any other activities (church, clinic, savings group, street committees, funeral groups, NGOs etc.)

## Appendix A4

Previous areas of residence for CMA population (Source: Census Data, 1996)  
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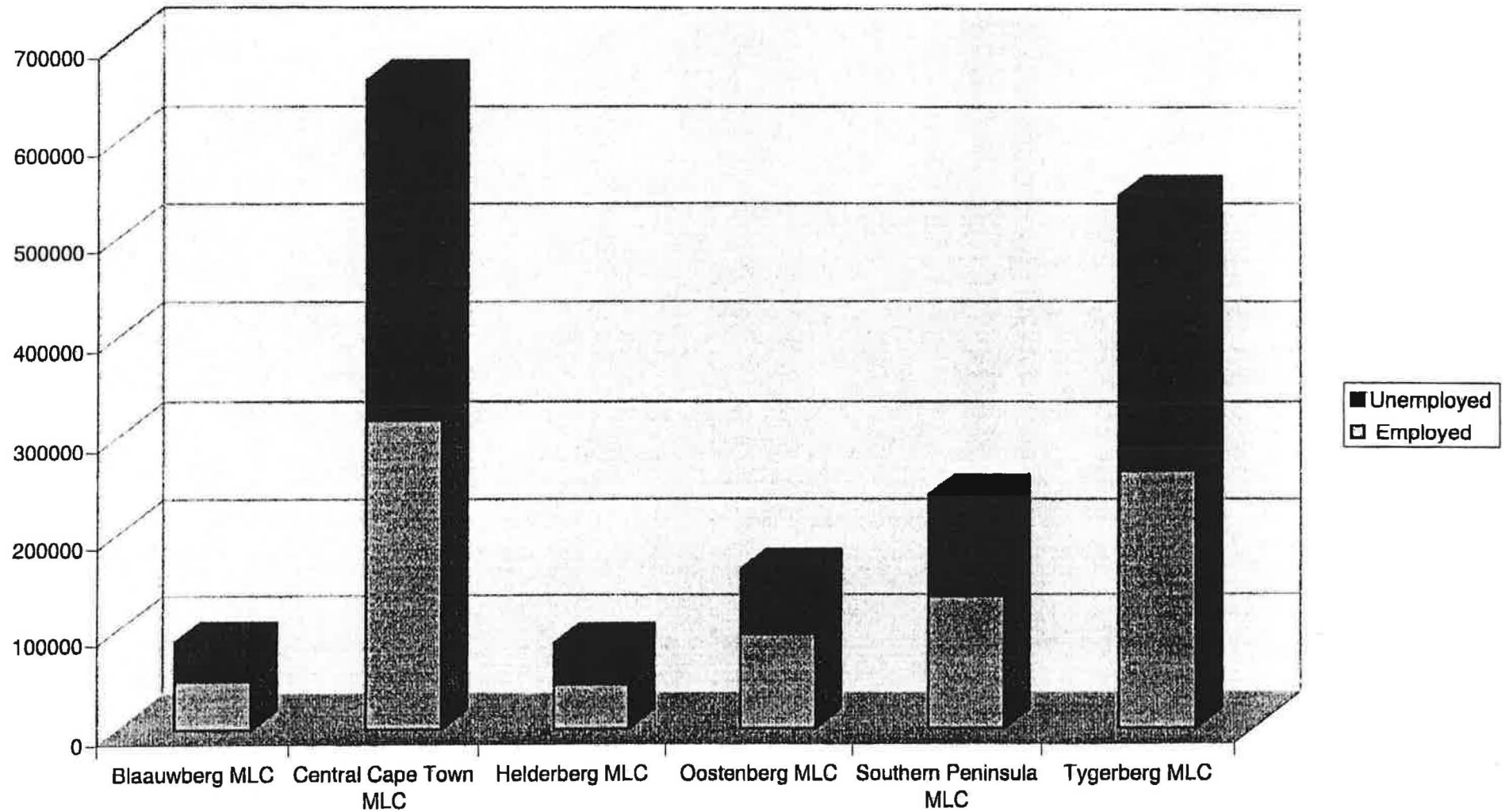


Areas of residence, other than Western Cape, for CMA population  
(Source: Census Data, 1996)  
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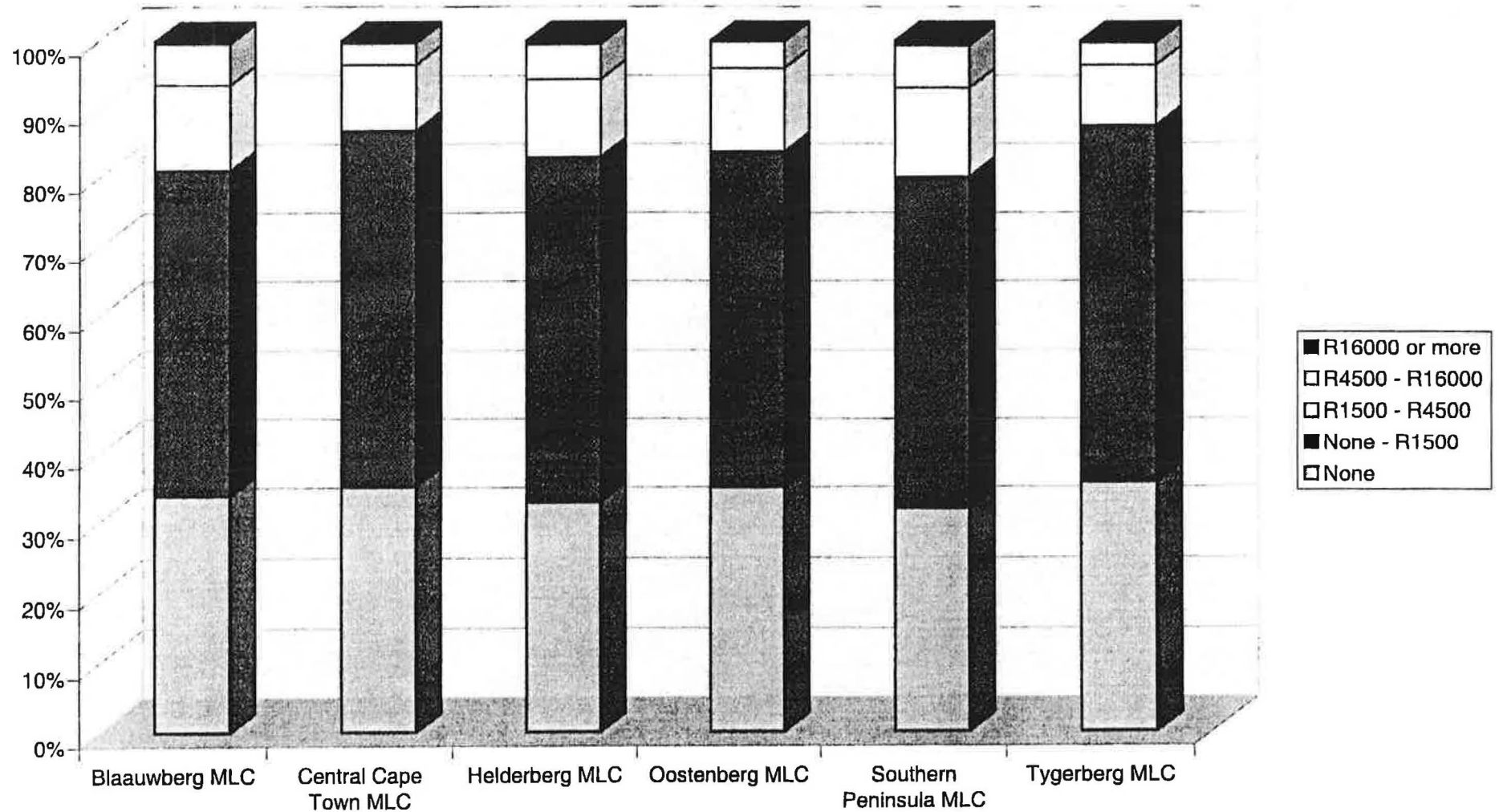
Appendix A5 (a)

**Employment levels in the CMA (Source: Census Data, 1996)**  
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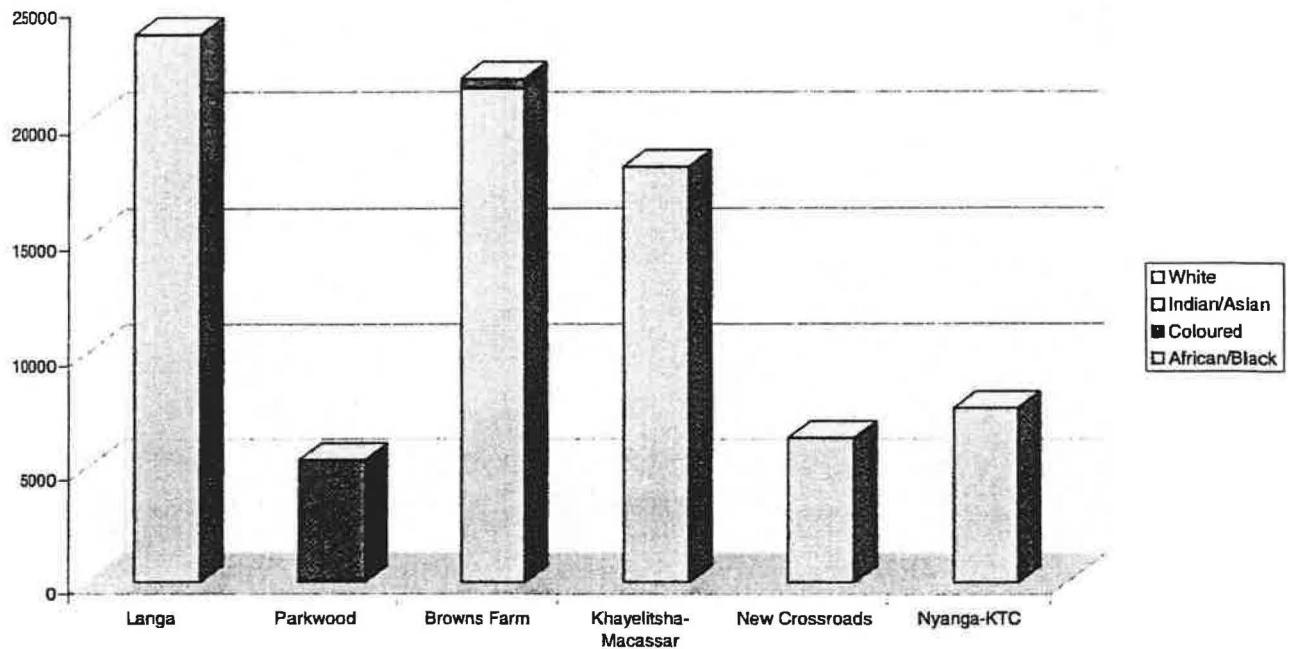
## Appendix A5 (b)

**Average Income Levels in the CMA (Source: Census Data, 1996)**  
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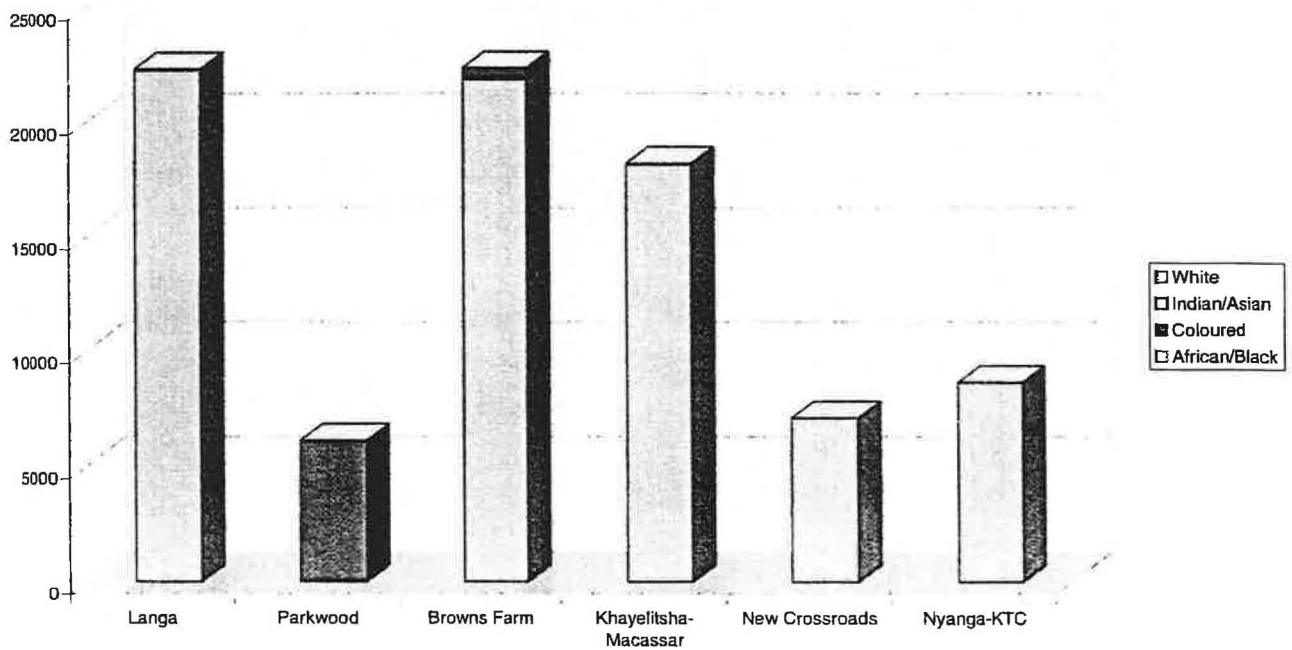


## Appendix A6 (a)

**Male Population Statistics for the Case Study Areas (Source: Census Data, 1996)**  
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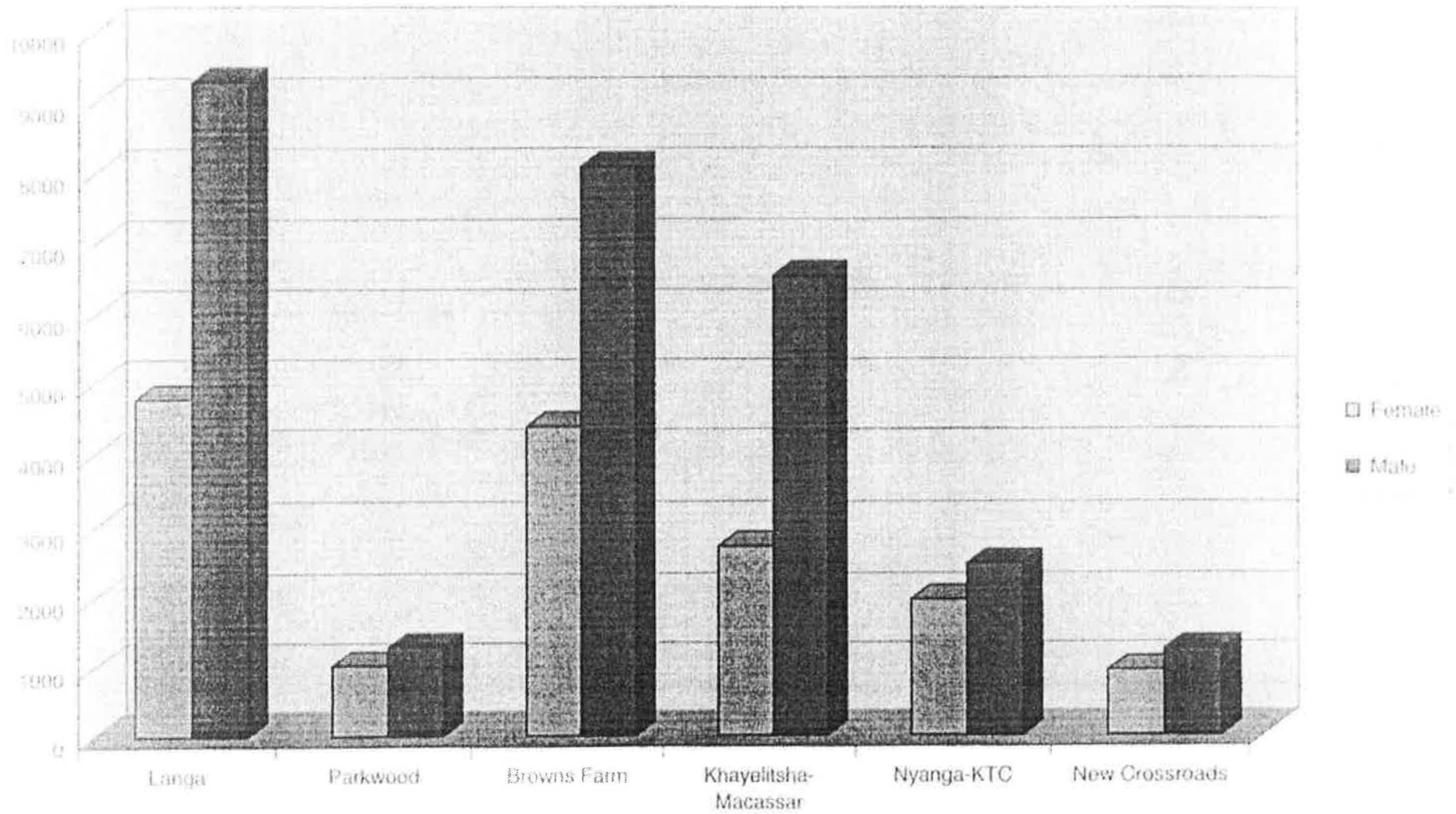
**Female Population Statistics for the Case Study Areas (Source: Census Data, 1996)**  
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Appendix A6 (b) Female/Male headed household in the case study areas (Source: Census Data, 1996)

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**Appendix A6 (c)**

**Languages spoken in the case study areas (Source: Census Data, 1996)**

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